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A Staff Study of The Bureau of Operating Rights

SERVICE TO SMALL COMMUNITIES

Part I

LOCAL SERVICE CARRIER COSTS AND SUBSIDY NEED REQUIREMENTS TO SERVE MARGINAL ROUTES

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This is Part I of a three-part study prepared by the Bureau of Operating Rights, A. M. Andrews, Director, Roy Pulsifer, Assistant Director. Part I was completed in four sections between March and August, 1971, and was edited without substantive changes in March, 1972. The analyses were performed under the general direction of Robert G. Cook, Chief, Licensing Unit B and Arthur B. Wells, Senior Industry Economist, by Arthur B. Barnes, Samuel J. Lebowich, James F. Ransom and other staff of Unit B.

* * * *

SUMMARY OF CONCLUSIONS

Local Service Carrier Costs and Subsidy Need Requirements to Serve Marginal Routes

This study identifies and costs local service carrier "marginal routes" i.e., that portion of a carrier's system that would not receive certificated service either now or in the future but for subsidy.

Air West, Allegheny, Frontier and Texas International were examined on the basis of 1969 data.

The report concludes that, in general, operation of the standard 40 to 60 seat aircraft employed by local service carriers is economically justified only at points originating 40 or more passengers a day. (Forty originations, is, of course, an average. Depending on the degree of integration with other marginal points and other factors, given stations of the various carriers occasionally achieve better than average results if fewer passengers are enplaned and vice

versa). Operating profits are earned in the case of some 40-or-more-passenger points, and even where losses are experienced at such points "economic need" 1/ is relatively low on both a percentage-of-revenue and per-passenger basis. Moreover, the 40 passenger-and-up services typically have potential for further improvement given reasonably good general economic conditions. Accordingly, they are considered non-marginal, and are believed not to require public subsidy on the long term, assuming normal traffic growth.

Conversely, less than 40 originations generally means that substantial subsidy is required for the provision of two round trips a day with standard local service equipment. Moreover, many of these smaller communities possess static population, or population that is in actual decline. The study focuses on this genuinely marginal part of the local carrier system--service at points originating fewer than 40 passengers a day.

For the four carriers, detailed economic analyses are presented for 38 marginal routes involving 126 marginal points. These services developed aggregate operating losses and economic need of $20.5 million and $27.4 million, respectively. Frontier served the largest number of marginal points--56--and experienced the largest marginal

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1/ "Economic need" consists of the operating loss plus return on investment requirement (including an allowance for income taxes). Where there is an operating profit, the economic need is, of course, less than the return and tax requirement. Economic need is frequently referred to as "subsidy need".

route operating loss of the four carriers, $8.1 million, and largest economic need, $11.0 million. Texas International served the fewest marginal points--15, and had the lowest operating loss, $2.9 million, and lowest economic need, $3.9 million.

Total system subsidy payments to these carriers in 1969 aggregated $20.8 million or $6.6 million less than the economic need of their marginal routes under the then prevailing subsidy payment formula known as Class Rate IV. (One of the four carriers --Air West--received subsidy payments of $9.4 million, or $2.1 million in excess of its marginal route economic need.) Under Class Rate V, effective in fiscal year 1971, actual subsidy payout was based on a revised formula favoring marginal points in order to create incentives for the carriers to maintain adequate service at such points. These higher subsidy payments more closely approximate, and many exceed, the high economic need--on average $22.43 per passenger--for the marginal routes surveyed by Part I.

1.0 INTRODUCTION

1.1 Purpose of the Study. This Study identifies and costs certain certificated services of Allegheny, Air West, Frontier and Texas International which appear incapable of generating any operating profits or return on investment now or in the future. These permanent loss situations (herein "marginal routes") show a formidable subsidy need at 1969 cost levels--$5.2 million for Allegheny, $7.3 million for Air West, $11.0 million for Frontier and $3.9 million for Texas International. Included are services to 22 Allegheny points, 33 for Air West, 56 for Frontier and 15 for Texas International, each of which generated fewer than 40 daily passengers in 1969.

The factual data developed, and the conclusions derived therefrom, are useful in evaluating various alternatives related to continuing or changing the type of service provided to the nation's smaller and relatively isolated communities which are incapable of fully supporting, on a self sustaining basis, certificated air service.

1.2 Recent industry trends; effect on carriers' low density service. The original role of local service carriers in the nation's air transportation system was the provision of service on highly-subsidized linear routes extending principally between small and

medium-sized communities, on one hand, and regional transfer points on the other. Significant additional responsibilities were undertaken in the decade of the sixties, particularly since 1966: the carriers obtained access to numerous high-density, intermediate-haul, hub-to-hub markets by the removal of stop restrictions and were awarded route extensions between the small and medium-sized communities originally served and out-of-region major traffic sources such as New York, Chicago and Los Angeles.

In addition to the public benefits resulting from these services, the Board anticipated that the growth and operating efficiencies inherent in the new authority would provide carrier strengthening, internal cross-subsidization of the original feeder routes, and reductions in required subsidy. Table 1 furnishes some indication of the growth which the locals have in fact achieved in large part as a result of this broadened route program:

TABLE 1

INDICATORS OF LOCAL SERVICE CARRIER GROWTH

	Overall Available Ton Miles	Scheduled Service Revenue Passenger Miles	Commercial Revenue	Investment 1/
Amount (in millions)				
1965	585	2,621	$225	$150
1966	761	3,468	293	242
1967	1,024	4,114	349	366
1968	1,470	5,489	460	527
1969	1,859	6,311	576	588
1970 2/	2,113	7,220	681	602

TABLE 1 (cont.)

	Overall Available Ton Miles	Scheduled Service Revenue Passenger Miles	Commercial Revenue	Investment 1/
Percent Increase from Previous Similar Period				
1966	30.1%	32.3%	30.2%	61.3%
1967	34.6	18.6	19.1	51.2
1968	43.6	33.4	31.8	44.0
1969	26.5	15.0	25.2	11.6
1970 2/	20.0	18.2	26.3	1.8

1/ Includes equipment purchase deposits prior to 1967.
2/ Year ended September 30 (preliminary data).
Source: Air Carrier Traffic Statistics; Air Carrier Financial Statistics; Handbook of Airline Statistics.

The growth in capacity in four-and-three-quarter years from 1965--a 261% increase as measured by ATMs--has been substantial and has been accompanied by reductions in total operating expense per ATM and per RTM amounting to 27% and 10%, respectively. However, during the same period, the local service industry experienced a 48% cut in subsidy payments as well as a number of factors adversely affecting commercial revenues--development of the interstate highway system, making travel by private car more attractive in many short and medium-haul markets; loss of population in many sparsely-settled communities served by these carriers, particularly in the west; and introduction of air taxi and intrastate service at certain points (with however, limited effects to date).

Regardless of the exact causes, the improvement in earnings necessary to support the four-fold increase since 1965 in aircraft and related investment has not been forthcoming:

TABLE 2

LOCAL SERVICE CARRIERS' OPERATING RESULTS, SUBSIDY NEED AND SUBSIDY RECEIVED

	Operating Loss Before Subsidy	Economic Need: Including Return on Investment	Economic Need: Including Return & Tax	Actual Subsidy
	(1)	(2)	(3)	(4)
Amount (in millions)				
1965	$42	$57	$66	$66
1966	31	54	65	55
1967	50	80	91	51
1968	50	92	108	41
1969	52	99	116	36
1970 1/	27	75	94	34

1/ Year ended September 30 (preliminary data).

Notes to columns:

(1) & (4) From Air Carrier Financial Statistics; Handbook of Airline Statistics.

(2) Column 1 plus return on investment. Return computed using the differentiated rates of return (including minimum rates) incorporated in the class subsidy rate effective in each period. For this purpose the total investment shown in Table 1 was spread to the various classes of investment in proportion to the actual distribution at September 30 of each period.

(3) Column 2 plus Federal income tax requirement. Tax computed at the prevailing rate in each period.

In none of the above years did the local service carrier group earn an operating profit from commercial revenues; except for 1965,

its total subsidy need (including a full tax provision) has exceeded actual subsidy received (by over three times in 1969). During the last four years, the economic need based on allowable return (column 2 of Table 2) has exceeded actual subsidy received by an aggregate $184 million. Results such as these cannot continue for any extended period.

The carriers have attempted to adjust to the adverse profitability trend, in part, by discontinuing service on the less dense routes and to smaller communities, particularly where a commuter replacement has been available. For its part, the Board has moved away from the former comparatively low use-it-or-lose-it standard of five originating passengers per day above which carriers were expected to continue service regardless of cost. Thus, in a recent case where the projected traffic substantially exceeded this standard and in the absence of extreme community isolation, the Board determined that a subsidy need of $16.70 per passenger would be excessive in relation to the benefits conferred (Service to Sedalia, Missouri, Docket 16606, Order 70-6-22, June 2, 1970).

The trend toward less certificated service on thin routes has been hastened by the gradual but steady decline in subsidy payments (Table 2) and by the substantial conversion to jet aircraft which cannot operate into many small-city airports:

TABLE 3

PROPORTION OF JET TO TOTAL LOCAL SERVICE CARRIER OPERATIONS

Number of Aircraft	Prop	Jet	Total	Percent Jet of Total
December 31, 1966	379	19	398	4.8%
December 31, 1969	315	148	463	32.0
Available ton miles (in millions)				
Calendar 1966	669.0	89.2	758.2	11.8
Year to June 30, 1970	650.8	1,394.9	2,045.7	68.2
Revenue passenger miles (in millions)				
Calendar 1966	3122.4	345.1	3,467.5	10.0
Year to June 30, 1970	2378.1	4,490.2	6,868.3	65.4

Source: CAB Report, Number of Aircraft Available for Service; Form 41 Reports.

Table 3 reflects a dollar investment in jets (at cost) which increased from $47 million or 20% of investment in all aircraft types in 1966, to $291 million or 52% by the end of 1969. Also reflected is the substantial jet capacity leased by the local carriers.

Despite the overall unit operating expense reductions mentioned on page 2, costs on the carriers' original feeder-type routes have increased due to rapidly escalating pay scales and other largely non-controllable increases. For example, the cash aircraft operating expense for an Air West F-27 turboprop 100-mile hop in 1969 was 31% higher than the similar operation in 1965; over the same time span, Frontier experienced direct cash cost increases of 19% for a similar hop.

1.3 Scope of the analysis. The present report deals with the

costs of the carriers' marginal routes. A marginal route as defined herein includes services to one or more points at which the carrier originated fewer than 40 daily passengers in 1969. The various routes were set up on the basis of actual 1969 flight routings for each carrier. Although certain other limiting criteria were applied, current subsidy eligibility status was not a factor in determining marginality. All of the criteria are fully explained in Section A, Air West.

A description of general costing methodology employed is given in Appendix E.

The analyses indicate that nearly all operations at stations originating less than 40 passengers a day, or 80 in-and-out, are extremely unprofitable. Service at these points by presently certificated carriers without Federal subsidy support, that is, by cross or internal subsidization, is not a practical prospect, and accounts for the emphasis in this report on costing such operations. This approach is consonant with the restructuring of the subsidy payment formula under Class Rate V to provide incentives for the retention of certificated service to the smaller, out-of-the-way cities pending the development of alternative policies.

By contrast, operations at points originating more than 40 passengers are less of a drain even where they consist of feeder rather than hub-to-hub, competitive services. And the ratios of

operating loss and subsidy need to commercial revenue generally improve as the size of stations served increases. This holds out reasonable prospects that these denser feeder routes can reach an operating breakeven point or better two or three years after the current traffic slowdown ends and normal market growth resumes. In these circumstances, unlike the marginal routes, these services could be effectively cross-subsidized pending their development as fully self sustaining routes.

* * *

2.0 Section A, Air West

2.1 Marginal route results in the context of overall results and subsidy paid. Air West's marginal routes in 1969 showed the following economic results:

TABLE 4

AIR WEST 1969 MARGINAL ROUTE OPERATING RESULTS AND SUBSIDY NEED

	Amount	Per Passenger	Per Revenue Dollar
Commercial Revenue	$5,487,000	$18.00	-
Operating Loss	5,912,000	19.39	$1.08
Return & Tax Requirement	1,379,000	4,53	.25
Economic Need	7,291,000	23.92	1.32
Number of Passengers	304,847		

As shown, the subsidy need of Air West's marginal operations was $7.3 million. On its entire system--jet operations, hub-to-hub routes, foreign routes, denser feeder routes, marginal routes-- Air West experienced an economic need of $27.8 million in 1969. By contrast with these need figures of $7.3 million and $27.8 million, Air West received $9.4 million in Federal subsidy payments. This means first, that Air West was overpaid by $2.1 million in terms of subsidy support for its strictly marginal system ($9.4 million less $7.3 million); and second, that the marginal routes' economic need of $7.3 million, although sizeable, accounted for only about 26% of the carrier's huge 1969 system-wide need ($7.3 million ÷ $27.8 million). Obviously, Air West's supposedly more lucrative routes contributed nothing by way of cross-subsidization to support of the marginal routes and in fact drained subsidy--in view of the relative proportions of need on the marginal and non-marginal routes, it is apparent that the latter in 1969 effectively absorbed a substantial portion of the $9.4 million of subsidy actually paid Air West.

2.2 Analysis of Air West's marginal routes. The 1969 results shown in Table 4 reflect operations on eleven separate marginal routes, identified under criteria explained hereafter. Collectively, these routes serviced 33 marginal points with a combined population of one million. One or more of these cities is located in each of the eight western states in which Air West operates. The cities comprise 43% of the

total of 76 stations served by Air West, accounting for 5.2% of Air West's 1969 originating passengers, 8.1% of its revenue passenger miles in scheduled service, and 9.2% of its passenger revenues. An alphabetical listing of these marginal points is given in Appendix B.

Operations were performed mainly with F-27/27A 40-passenger aircraft although Piper Navajo six-seaters were used to some extent on four of the routes. The F-27/27A marginal route operations comprised 36% of system F-27/27A operations in terms of departures and 28% in terms of mileage. Aircraft operating expenses on the eleven marginal routes amounted to $6.6 million and servicing expense came to $4.8 million; 1/ a total of $11.4 million, or 12.8% of Air West's system operating expense. As Table 4 shows, the marginal routes on an overall basis incurred a subsidy need per passenger of $23.92. In assessing the level of unprofitability, it is highly significant that 15 of the 33 low-volume points received at least some service from a commuter air carrier, another certificated carrier, or, in one case--Lake Tahoe, California--an intra-state carrier. See Part II of the Study.

1/ The resultant ratio of servicing expense to aircraft operating expense under the Subpart K methods we have used--73%--is lower than Air West's system ratio of 100%, as might be expected in order to reflect the comparatively low loads on the marginal routes. Furthermore, the capacity elements of Subpart K servicing expense (weighted departures and weighted stations) produce 35% of the total servicing costs we have computed. The comparable system-wide figure is only 26%. In addition to these servicing costs there is a full allocation of return and tax requirements to the marginal routes. Thus, two critical characteristics--high capacity costs relative to traffic volumes and comparatively low traffic volumes and associated costs--are properly reflected in the marginal route costing.

Again referring to Table 4, the $7.3 million is the subsidy need for the marginal system in 1969, as operated. However, if all of the marginal routes were deleted the subsidy need decrease (at 1969 cost levels) would come to $7.8 million. The extra $.5 million reflects the on-line revenue (net of traffic-handling expense) that Air West would retain on its remaining system.

A fuller examination of Air West's marginal routes, their public service benefits and costs, is given in Appendices A-1 through A-11 which show stations served, segment operational and traffic data, financial results and other pertinent information for each route. As may be observed, the routes include a wide variety of service situations. For example, the size of cities served in terms of 1970 population ranges from 151,000 (Tacoma, Washington) down to well under 3,000, as typified by Sun Valley/ Hailey/Ketchum, Idaho; the median for all 33 cities is 17,000. Cedar City, Utah and Kalispell, Montana are relatively isolated; on the other hand, Marysville, California is only 43 road miles from the hub point Sacramento.

Traffic originated per station per day ranged from a high of 38 passengers (Chico, California) down to one passenger (Ontario, Oregon/Payette, Idaho).

The various routes also show a wide range of economic need per passenger and per revenue dollar by comparison with the

average for all eleven routes. For example, Baker and Ontario, Oregon, served with Piper Navajo aircraft, incurred an extraordinarily high need of $79.00 per passenger and $3.60 per dollar of commercial revenue (Appendix A-11). The operating loss ratio (operating loss as a percentage of commercial revenue) was 344% on this route. On the other hand, Air West's Idaho Falls-Pocatello service involved a need of $10.41 per passenger and 48¢ per revenue dollar, and an operating loss ratio of 32% (Appendix A-3). For further details regarding each route consult the appropriate section of Appendix A.

2.3 Criteria for defining a marginal route. To identify those certificated services which are, and will be, incapable of generating any operating profit or return on investment, the carrier's smaller feeder-type services were focused upon. These principally include small points which are geographically isolated and/or lack alternate good public transportation. It can be expected that, aside from temporarily increased financial aid of the type currently being provided by Class Rate V, Congress, the Executive and the Board will increasingly insist that Federal subsidy of air transportation be limited to the type of service to small communities and out-of-the-way points included in our definition of marginality.

Because of this strong interest in more precisely channeling subsidy benefits in the future, it was decided that subsidy eligibility under existing certificates of public convenience

and necessity should be ignored in determining a route's marginality status, that is, that economic tests should govern. In addition, it appeared desirable to evaluate Air West's various feeder-type operations on the basis of comparative profit margins rather than solely on absolute dollars of subsidy need. This would assist in interpreting 1969 results, which apparently were distorted by abnormally high unit costs. (Air West's Subpart K servicing unit costs, for example, exceeded those of the next highest local service carrier--Mohawk--by 32% in the year ended September 30, 1969. This contributed to a 1969 system-wide subsidy need over twice that of any other local service carrier).

Accordingly six factors were adopted for defining the marginal operations of Air West and any carriers subsequently studied: (1) marginal routes were limited to operations serving stations where Air West originated fewer than 40 daily passengers. Where this condition was satisfied stations were nevertheless excluded from the marginal system where Air West (2) provided any pure jet schedules or (3) averaged more than six daily actual flight departures. Also excluded were (4) services to satellite airports, (5) services to foreign points, and (6) services producing an operating profit. Comments on each factor are as follows:

(1) Only services to stations where Air West originated fewer than 40 passengers per day were considered. The 33 stations listed

in Appendix B met this principal requirement. At several other stations, shown in Appendix C, Air West also originated fewer than 40 passengers a day but failed to satisfy one or more of the remaining criteria.

The 40 passenger cut-off was not predetermined; it was arrived at by analysis of 1969 operations. The first step was to determine the actual route patterns for Air West's feeder-type operations. This involved, where possible, grouping stations served by common flights and in general devising routes according to aircraft rotation and traffic flows rather than from existing certificate descriptions. The various resulting routes were then costed (see Appendix E for methodology). As already mentioned, operations serving the under-40-passenger stations were found to be extremely unprofitable, with operating losses of a magnitude not likely to be eliminated in the foreseeable future through any reasonable rate of traffic growth. In addition, with a subsidy need ranging from about $10 to $79 per passenger, aggregating $7.3 millions for these under-40-passenger services, it is unrealistic to expect effective internal subsidization from the carrier's major operations. Utilization of smaller aircraft could not produce enough cost savings to eliminate operating losses and would tend to lower commercial revenue where traffic peaking occurs. Thus, certificated service at the under-40-passenger feeder points is not feasible without Federal subsidy

support. On this basis it was determined that the eleven routes shown in Appendix A comprise genuinely marginal operations for Air West.

By contrast, operations at nine stations served exclusively with non-jet equipment but originating 40 or more Air West passengers a day (these can be identified from Appendix D) produced substantially better overall results. For example, Air West's Pullman and Walla Walla, Washington operation (48 and 47 daily passenger originations, respectively) produced an operating loss ratio of 25% and a subsidy need per passenger of $6.78 and per revenue dollar of 36¢. Not all of these larger stations did as well; however, the overall operating loss ratio is comparatively low on these denser feeder routes. Moderate traffic growth for two or three years should tend to reduce such loss ratios to small proportions, or possibly under favorable conditions to produce some operating profits. This could be reinforced by elimination of factors producing the apparently atypically high 1969 unit costs. Thus, operating results could improve enough that even a modest degree of cross-subsidization from Air West's major routes would be effective. Finally, at stations where Air West is able to originate more than 40 passengers a day, or 80 in-and-out, it is logical to expect reasonably good loads with two turboprop round trips, at least in instances where the traffic can be consolidated

with that of other cities. In sum, it became clear during the course of the analysis that, on Air West's system, services to cities originating 40 or more daily passengers are entitled to non-marginal classification.

(2) Jet operations were excluded. The local service carriers acquired two and three-engined pure jet aircraft--DC-9/s, B-737's, B-727's--as a competitive tool in such hub-to-hub operations as Las Vegas-Los Angeles; the aircraft also are used in the larger non-competitive markets such as Las Vegas-Phoenix and Las Vegas-Santa Ana. Route awards to local service carriers in recent years have been based on findings of subsidy need reduction, and were made subsidy ineligible. Moreover, Federal funding was never intended to subsidize the acquisition of jet fleets to service subsidy-ineligible routes, nor was it contemplated that Federal subsidy would be needed to support jet operations on the original feeder-type routes. In addition, because of their size and operating cost characteristics, jets are unsuitable for service to points of low traffic generation. Consequently, operations to any under-40-passenger points where Air West provided regularly scheduled jet flights were excluded from the marginal routes. However, as Appendix C indicates, no Air West cities were excluded solely because of this criterion.

Although Stockton, California is included on marginal route A-2, it should be noted that Air West has introduced jet service there

since 1969. Thus, if this report were based on fully current data, services to Stockton would be excluded regardless of the traffic level.

(3) Operations to stations where Air West provided more than six daily flight departures. The purpose of this standard was to exclude from the marginal routes any station where a carrier, despite under-40-passenger volume, mounted substantially more than a minimum pattern of service. The theory is that any restructured subsidy method should not be expected to support services to points where a clearly excessive number of schedules is being provided. 2/ However, in 1969 Air West provided no such excess services.

(4) Services to satellite airports were excluded. As part of the major metropolitan areas, the principal California satellites were considered to have significant potential regardless of Air West's 1969 traffic levels and specific route alignments at these points. Satellites served in 1969 included Burbank, Long Beach, Oakland, San Jose and Riverside/Ontario. Without this standard, 1969 Air West operations at Long Beach, Oakland and Riverside (but not Ontario) would have fallen into the marginal classification.

(5) Operations to foreign points were excluded. These operations are beyond the scope of a domestic subsidy-support program. Foreign points served included Calgary, Canada, and LaPaz, Mazatlan and

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2/ The burden of such excess schedules, if related to route segmentation, junction points, etc., could be eliminated at carrier initiative through relatively simple route adjustment procedures.

Puerto Vallarta, Mexico.

(6) Services producing an operating profit were excluded. It was determined that a marginal route should not include operations producing an operating profit from commercial revenue. Such operations would show at least a partial return on investment and therefore require minimum, if any, internal subsidization. Thus, where some portion of a marginal route produced relatively good load and revenue levels in 1969, that specific portion was tested to determine whether it produced an operating profit standing alone. On this basis services to one Air West station -- North Bend, Oregon -- which otherwise would have been considered marginal, were excluded.

2.4 Air West - conclusion. To sum up Section A, although the major portion of Air West's 1969 losses and subsidy need are related to jet and trunkline-type services, the carrier is operating substantial marginal route services which require Federal subsidy support for continuance. Air West undoubtedly would dispute the $7.3 million subsidy-need figure arrived at herein, because of the fairly tight criteria employed in delimiting marginal operations. From a private, corporate-interest standpoint the carrier probably would consider any service as marginal (and thus subsidy-worthy) which, after a reasonable developmental period, failed to make an appreciable return on invested capital (certain tributary services might be less severely evaluated). And, based on subsidy-eligibility

provisions of its existing route certificate and its large system-wide economic need, Air West would be entitled to claim more than $7.3 million. However, for the reasons already stated, it is believed that the costing techniques and assumptions and the results obtained are correct from a long-range public policy standpoint.

Air taxi operators also must look critically at services not generating viable returns, but since their costs in specific markets are substantially lower than certificated carriers' average system costs their market-entry threshold is correspondingly lower (see Part II of this Study). Whether previously non-marginal Air West services will be converted to marginal status as a result of additional incursions by intra-state and air taxi operators is a question not directly focused on in this Part I. The possibility, however, seems a real one.

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3.0 Section B. Frontier

3.1 Marginal route results in relation to overall results and subsidy paid. Frontier's marginal routes in 1969 showed the following economic results:

TABLE 5

FRONTIER 1969 MARGINAL ROUTE OPERATING RESULTS AND SUBSIDY NEED

	Amount	Per Passenger	Per Revenue Dollar
Commercial Revenue	$13,956,000	$26.94	-
Operating Loss	8,104,000	15.64	$ .58
Return and Tax Requirement	2,897,000	5.59	.21
Economic Need	$11,001,000	$21.23	$ .79
Number of Passengers	518,065		

The marginal route subsidy need of $11 million amounted to 80% of Frontier's system-wide need of $13.8 million. By contrast with these need figures, Frontier was paid $6.7 million in Federal subsidy, or $4.3 million less than the marginal route need and $7.1 million under the system-wide need. The relationship of system-wide economic need to actual subsidy was not unlike that of the local service carrier group (see Table 2, Section 1.2).

3.2 Analysis of Frontier's marginal routes. The 1969 results shown in Table 5 reflect operations on fourteen separate marginal routes, established under criteria described in Section 2.3 above. 3/

3/ The Frontier marginal routes essentially comprise services to cities originating fewer than 40 Frontier passengers per day; excluded, however, are operations to five cities which showed operating profits for Frontier in 1969 and to three cities with more than six daily Frontier flight departures (see Appendix I for details). None of the other criteria for determining marginality came into play in the Frontier analysis.

The routes served 56 marginal points with a combined population of 1.6 million. One or more of these cities is located in 13 of the 15 Rocky Mountain/Midwest states served by Frontier (there were no Frontier marginal points in Nevada and South Dakota). The 56 cities comprise 58% of the total of 96 stations served by Frontier in 1969, accounted for 10.7% of Frontier's originating passengers, 15.7% of its revenue passenger miles in scheduled service and 19.8% of its passenger revenues. An alphabetical listing of the marginal points served on all 14 routes is given in Appendix H.

The marginal route operations were conducted principally with CV-580 50-seat aircraft; the CV-600 was used on less than 1% of the mileage. The CV-580/600 marginal route operations represented 57% of system non-jet operations in terms of departures and 47% in terms of mileage. Aircraft operating expense on the 14 marginal routes amounted to $13.3 million and servicing $8.7 million, a total of $22 million, or 26.8% of Frontier's system operating expense. Although Frontier's marginal route servicing expense per passenger is higher than Air West's--$16.83 vs. $15.65--Frontier's ratio of servicing expense to aircraft operating expense is actually lower, 65% compared to Air West's 73%. This is due to the fact that Frontier CV-580 direct costs--$25.75 per passenger and $1.40 per revenue plane mile--are 18% and 7% above the corresponding Air West marginal route unit costs. The latter reflect an 80-20 mix of F-27/27A and Navajo mileage. Frontier's

marginal route station costs (as shown in Forms 41 and herein on page 3, Appendices G-1 through G-14) averaged $32,900 compared to $43,600 for Air West (pages 3, Appendices A-1 through A-11), which may be an indication of smaller marginal point size, regional cost advantages in ground and indirect expenses or both.

The $11 million subsidy need shown in Table 5 is for the 14 marginal routes as operated in 1969. If all of the marginal routes were deleted, the subsidy need decrease (at 1969 cost levels) would come to $13 million. The additional $2 million reflects the on-line revenue net of expense that Frontier would retain on its remaining system.

A full analysis of Frontier's marginal routes is given in Appendices G-1 through G-14 which show, for each route, stations served, segment operational and traffic data, financial results and other pertinent information. To the extent feasible, each route is an independent complex serving closely related marginal points and can be separately evaluated. The results arrived at should fairly reflect the actual costs of each specific operation standing alone. 4/

The population of cities served extends from 328,000 (Tulsa, Oklahoma)down to 3,000 (Wolf Point, Montana) with a median for all

4/ In the summary results for the fourteen routes shown in Table 5, certain duplications resulting from mileage, traffic, and related costs and revenues on inter-route operations appearing in two separate marginal costings have been eliminated.

56 points of 14,000. Among the more isolated points served are Glasgow, Montana (Appendix G-7) and Garden City, Kansas (Appendix G-5), approximately 270 and 200 road miles, respectively, from the closest remaining certificated air service if Frontier's marginal routes were deleted.

Traffic originated per station per day ranged from a high of 39.6 passengers at Durango, Colorado (Appendix G-3) down to 1.7 passengers at Lewistown, Montana (Appendix G-7); the median for the 56 marginal points was 10.9 passengers per day.

The various routes also show a wide range of economic need per passenger and per revenue dollar by comparison with the averages for the entire marginal system. For example, service to Alliance, Chadron and Sidney, Nebraska (Appendix G-12) incurred a comparatively high subsidy need of $57.00 per passenger and $2.11 per dollar of commercial revenue. The operating loss ratio (operating loss as a percentage of commercial revenue) was 173% on this route. On the other hand, Frontier's Hot Springs, Arkansas service involved a need of only $4.78 per passenger and 21¢ per revenue dollar, and an operating loss ratio of 10%. For further details regarding each route consult the appropriate section of Appendix G.

3.3 Frontier - conclusion. In 1969 Frontier operated a marginal route system which was the most extensive geographically and in terms of number of stations served of any local service carrier. The

$11 million subsidy need for these marginal routes comprised the major portion of Frontier's 1969 system-wide subsidy need.

At 21 of the 56 Frontier marginal points there was commuter air carrier or certificated service by a carrier other than Frontier. To some indeterminate extent, this competition may have lifted the subsidy need figure above what Frontier otherwise would have experienced.

* * *

4.0 Section C, Texas International

4.1 Marginal route results in relation to overall results and subsidy paid. Texas International's marginal routes in 1969 showed the following economic results:

TABLE 6

TEXAS INTERNATIONAL 1969 MARGINAL ROUTE OPERATING RESULTS AND SUBSIDY NEED

	Amount	Per Passenger	Per Revenue Dollar
Commercial Revenue	$3,799,000	$22.15	-
Operating Loss	2,921,000	17.03	$ .77
Return and Tax Requirement	1,023,000	5.97	.27
Economic Need	$3,944,000	$23.00	$1.04
Number of Passengers	171,490		

The marginal route subsidy need of $3.9 million amounted to 30% of Texas International's system-wide need of $12.4 million. By contrast with these need figures, Texas International received $3.3 million in Federal subsidy, or $.6 million less than the marginal route need and $9.1 million under the system-wide need. This system-wide economic need exceeded actual subsidy received by a somewhat greater margin than that of the local service carriers as a group (see Table 2, Section 1.2).

4.2 Analysis of Texas International's marginal routes. The 1969 results shown in Table 6 reflect operations on seven separate

marginal routes, established under the criteria previously described.[5/] The routes served 15 marginal points [6/] comprising 29% of the total number of system stations, and accounted for 33% of the system non-jet departures, 8.8% of the system's passengers and 7.9% of system passenger revenue. For every dollar of revenue generated by the marginal routes, $1.04 of subsidy need resulted.

The $3.9 million subsidy need shown in Table 6 is for the seven marginal routes as operated in 1969. If all of the marginal routes were deleted, the subsidy need decrease (at 1969 cost levels) would come to $4.5 million. The additional $.6 million reflects the on-line revenue net of expense that Texas International would retain on its remaining system.

Additional information concerning the Texas International marginal routes is given in Table 7 below:

5/ The Texas International marginal routes essentially comprise services at cities originating fewer than 40 Texas International passengers per day; excluded, however, are operations to those cities with more than six daily Texas International departures, operations to four cities receiving jet service and operations to three Mexican points, one of which also received jet service (See Appendix M for details). One city, Jackson, Mississippi, which was served with a non-stop jet round trip operating six days a week between Jackson and Houston for a four month experimental period was nevertheless treated as a marginal point since Texas International did not subsequently schedule any jet service at Jackson.

6/ See Appendix L for a list of these points.

TABLE 7

TEXAS INTERNATIONAL 1969 MARGINAL ROUTES
ADDITIONAL DATA

	Marginal Routes	Total System	Percent Marginal Routes of System
Number of Stations	15	52	29.0%
Total Passengers (000)	171	1,950	8.8
Subsidy Need (000,000)	$3.9	$12.4	
Subsidy Received (000,000)		$ 3.3	
Percent Subsidy Received of Need	85%	27%	
Average Station Expense (Form 41)	$38,600		
Combined Population	661,000		
Aircraft Operating Expense per Passenger	$25.14		
Servicing Expense Per Passenger	$14.05		
Ratio-Svcg. Expense to Acft. Operating Exp.	56%		
Non-Jet Departures	33,683	101,908	33.0
RPM's in Scheduled Service (000)	40,088	542,219	7.4
Passenger Revenue (000)	$ 3,470	$ 43,747	7.9
Total Operating Expense (000)	$ 6,715	$ 55,110	12.2

An analysis of each Texas International marginal route is given in Appendix K showing stations served, segment operational and traffic data, financial results and related information. To the extent feasible, each route is an independent complex serving closely related marginal points and can be separately evaluated. The results arrived at should reasonably reflect the actual costs of each specific operation standing alone. 7/

The population of cities served extends from 150,000 (Jackson, Miss.) down to 16,000 (Brownwood, Texas).

7/ In the combined results shown in Table 6 the duplicate mileage, traffic, costs and revenues on inter-route operations have been eliminated.

Traffic originated per station per day ranged from a high of 37.2 passengers at Alexandria, La. (Appendix K-1), down to a low of 8.1 passengers at Galveston, Texas (Appendix K-4); the median for the marginal points was 15.0 passengers per day.

The various routes also show a wide range of economic need per passenger and per dollar by comparison with the averages for all seven marginal routes. For example, service to Lufkin, Texas (Appendix K-6) incurred a relatively high subsidy need of $40.00 per passenger and $2.05 per dollar of commercial revenue. The operating loss ratio (operating loss as a percentage of commercial revenue) was 162% on this route. By contrast, Texas International's service to Alexandria and Monroe, Louisiana, El Dorado and Pine Bluff, Arkansas, and Jackson, Mississippi, involved a need of $15.67 per passenger and 75¢ per revenue dollar, and an operating loss ratio of 52%. For further details regarding each route consult the appropriate section in Appendix K.

Currently, seven of the marginal points are receiving service with Beech 99 equipment and three cities, Jonesboro, Arkansas, and Lufkin and Victoria, Texas, are served exclusively with the Beech 99.

4.3 Results of other CV-600 operations. Marginal routes accounted for only 30% of Texas International's CV-600 mileage in 1969. The much larger non-marginal CV-600 operation produced an operating loss ratio of 22% (compared to 77% on the marginal routes) and a dollar

loss of $3.5 million, about half of the entire system operating loss of $7.1 million.

Due to the size and relative importance of the non-marginal CV-600 loss a limited analysis was made of certain of these operations. Operations at Texarkana (originating 67 passengers per day) produced an operating loss of $328,000 and operating loss ratio of 28%. By contrast, operations at Waco (originating 53 passengers per day) produced an operating loss of $533,000 and loss ratio of 82%, higher than the loss ratio of some marginal operations (Appendix K).

Tyler and Longview were excluded from the marginal route analysis because each exceeded the criterion of six daily flight departures, although generating only 28.15 and 31.50 daily passengers, respectively The two points, which are only 40 air miles apart, had a combined operating loss of $793,000 in 1969. Texas International operated four westbound and one eastbound daily flights serving both points, a total of 1,713 annual flights with aircraft operating expense alone of $139,000. Although some consolidation of traffic is made possible by these flights, it appears that the carrier may be hamstrung by certificate requirements. 8/ Both cities are segment junction points for four different segments,3,4, 6 and 13, and the requirement to

8/ At the time of preparation of this Study, the carrier was still operating five daily flights between the points. Approximately 50% of the current (April 15, 1971) service at Longview and Tyler is operated with Beech 99 equipment.

land at the segment junction points probably explains the volume of service moving through and between the two cities. Two certificate amendments could rectify this situation: (1) overflight rights at the segment junction points in monopoly markets coupled with retention of intermediate stop restrictions in competitive beyond markets; or (2) deletion of one of the points permitting the other to serve as a regional airport for both cities. Presuming the latter, the effect of deleting Tyler was computed. Tyler was selected for deletion becau of the location of the two airports. Tyler is west of Longview and Tyler's airport is six miles west of that city while Longview's airport is seven miles south of Longview and is more accessible to Tyler's traffic than would be the reverse situation. Interstate highway 20 would be utilized by Tyler passengers for most of their journey to the Longview airport, approximately 47 miles. The analysis of the effect of deleting Tyler indicates that a reduction of $383,000 in economic need could have been achieved if this modification in operating authority had been effective in 1969. This result reflects conservative forecasting techniques where traffic retention is concerned. For example, it was assumed that only seven percent of the Tyler-Dallas on-line O&D traffic would utilize Texas International's service at the Longview Airport, anticipating that the remaining 93 percent would make the 97 mile trip by car.

4.4 Texas International - conclusion. The 1969 marginal routes

operated by Texas International served 15 marginal points and accounted for about thirty percent of the carrier's system-wide subsidy need. In terms of passengers handled, the marginal system was roughly one-half and one-third the size of Air West's and Frontier's respective marginal routes. The subsidy cost per passenger of $23.00 was 4% less than the $23.92 experienced by Air West and 8% above Frontier's $21.23. As for competition, commuter air carriers operated at three of the Texas International marginal points, and three were served by another certificated carrier. One point, Jackson, Mississippi, received service by both a commuter air carrier and two other certificated carriers.

* * * *

5.0 Section D, Allegheny

5.1 Marginal route results in relation to overall results and subsidy paid. Allegheny's marginal routes in 1969 showed the following economic results:

TABLE 8

ALLEGHENY'S 1969 MARGINAL ROUTE OPERATING RESULTS AND SUBSIDY NEED

	Amount	Per Passenger	Per Revenue Dollar
Commercial Revenue	$5,509,000	$24.22	-
Operating Loss	3,632,000	15.97	$ .66
Return and Tax Requirement	1,524,000	6.70	.28
Economic Need	$5,157,000	$22.67	$ .94
Number of Passengers	227,467		

The marginal route subsidy need of $5.2 million amounted to 39% of Allegheny's system-wide need of $13.3 million. By contrast with these need figures, Allegheny received $1.4 million in Federal subsidy, or $3.8 million less than the marginal route need and $11.9 million under the system-wide need. This system-wide economic need exceeded actual subsidy received by a greater margin than that of the local service carriers as a group. (See Table 2, Section 1.2.)

5.2 Analysis of Allegheny's Marginal Routes. The 1969 results shown in Table 8 reflect operations on six separate marginal routes as operated. 9/ The routes served 22 marginal points, comprising

9/ The Allegheny marginal routes essentially comprise services at cities originating fewer than 40 Allegheny passengers per day (see Appendix Q); excluded, however, are operations to three cities generating less than 40 passengers per day (Cape May, New Jersey, Evansville, Indiana, and Reading, Pennsylvania) where Allegheny achieved an operating profit. (See Appendix R.)

30% of the total number of system stations, and accounted for 23% of non-jet departures, and 5% of system passengers and passenger revenue. For every dollar of revenue generated by the marginal routes, $.94 of subsidy need resulted.

The $5.2 million subsidy need shown in Table 8 is for the six marginal routes. If all of the marginal routes were deleted, the subsidy need decrease (at 1969 cost levels) would come to $6.0 million. The additional $.8 million reflects the on-line revenue net of expense that Allegheny would retain on its remaining system.

TABLE 9

ALLEGHENY 1969 MARGINAL ROUTES
ADDITIONAL DATA

	Marginal Routes	Total System	Percent Marginal Routes of System
Number of Stations	22	73	30.0%
Total Passengers 10/ (000)	227	4,655	4.9
Subsidy Need (000,000)	$5.2	$ 13.3	39.0
Subsidy Received (000,000)		$ 1.4	
Percent Subsidy Received of Need	27%	10%	
Average Station Expense (Form 41)	$40,800		
Combined Population (000)	1,866		
Aircraft Oper. Exp. Per Passenger	$ 25.60		
Servicing Expense Per Passenger	$ 14.58		
Ratio-Svcg. Expense to Acft. Oper. Exp.	57%		
Non-Jet Departures	37,659	161,904	23.0
RPM's in Scheduled Service (000)	46,950	1,320,991	3.6
Passenger Revenue (000)	$ 5,121	$ 109,282	4.7
Total Operating Expense (000)	$ 9,141	$ 118,708	7.7

10/ Allegheny submitted on-flight, rather than on-line, O&D traffic routings for 1969. To eliminate any inconsistency with the treatment of the other carriers, the on-flight total traffic reported for each Allgheny marginal point was distributed to the appropriate on-line markets on the basis of data for 1969 in Table 10 of the Board's Surveys.

An analysis of each Allegheny marginal route is given in Appendix P showing stations served, segment operational and traffic data, financial results and related information. To the extent feasible, each route is an independent complex serving closely related marginal points and can be separately evaluated. The results arrived at should reasonably reflect the actual costs of each specific operation standing alone. 11/

The population of cities served extends from 379,000 (Toledo, Ohio) down to 15,000 (Martinsburg, W. Va.).

Traffic originated per station per day ranged from a high of 39.8 passengers at Atlantic City, N. J. (Appendix P-2), down to a low of 2.2 passengers at Kalamazoo, Michigan (Appendix P-3); the median for the marginal points was 9 passengers per day.

The various routes also show a wide range of economic need per passenger and per dollar by comparison with the average for all six marginal routes. For example, the route serving Martinsburg, W. Va. (Appendix P-4), incurred a high subsidy need of $206.13 per passenger and $5.78 per dollar of commercial revenue. The operating loss ratio (operating loss as a percentage of commercial revenue) was 479% on this route. By contrast, the route serving Altoona, Franklin and Johnstown, Pa., Lima, Toledo, Youngstown and Zanesville, Ohio, and Wheeling, W. Va. (Appendix P-1), incurred an average need of $16.57

11/ In the combined results shown in Table 8, we have eliminated duplicate mileage, traffic, costs and revenues on inter-route operations.

per passenger and 63¢ per revenue dollar, and an operating loss ratio of 40%. For further details regarding each route consult the appropriate section in Appendix P.

The 1969 marginal routes operated by Allgheny served 22 marginal points and accounted for about 39% of the carrier's system-wide subsidy need.

Allegheny's marginal route results doubtless were influenced by the fact that commuter air carriers operated at 13 of the Allegheny marginal points, four of which were also served by other certificated air carriers. Two other marginal points, South Bend and Youngstown, were served by other certificated carriers but no air taxis. Of the 22 marginal points, only seven were served by Allegheny on an exclusive basis.

In 1969, Allegheny's jet operations (primarily over routes awarded the carrier for strengthening purposes) achieved an operating profit of approximately $6.9 million. Further development of these major routes, the program for substitution of Allegheny commuter service where feasible, and the resumption of a more normal rate of industry traffic growth should enhance the carrier's overall position.

6.0 Part I - conclusion. The marginal route costing for the four local service carriers establishes a factual floor for the purpose of reaching conclusions applicable to the industry.12/ Despite economic, geographic, and service differences between the various

12/ Detailed costs were developed for 38 marginal routes serving 126 marginal points (Appendices A, G, K, P).

routes, certain broad conclusions emerge:

(1) subsidy paid the carriers, with one exception, failed to cover their marginal route economic needs; (2) each of the four carriers' overall marginal route systems incurred an economic need per passenger in the $21-$24 range; and (3) non-marginal routes incurred substantial economic needs in some instances but the unit costs and operating margins were far better than those of the marginal routes.

There follows a brief summary of these principal findings:

(1) With one exception--Air West--total subsidy paid the carriers fell short of meeting the economic need of their marginal routes:

TABLE 10

SUBSIDY PAID VS. MARGINAL ROUTE NEEDS

	Marginal Route Subsidy Need	Total System Subsidy Payment	Percent Payment of Need
Amount (in millions)			
Air West	$7.3	$9.4	129%
Allegheny	5.2	1.4	27
Frontier	11.0	6.7	61
Texas International	3.9	3.3	85
	$27.4	$20.8	76%

Since 1969, of course, the Board has introduced Class Rate V with substantially increased financial incentives for service to marginal points; in addition, the trend toward eliminating the most

uneconomic services has continued. For example, between January 1, 1969 and June 30, 1971, ten Allegheny marginal points included in this analysis were either suspended or transferred to air taxi operators (see Appendix T for a listing of suspended points). 13/

(2) Although there is a host of differing operating situations and although the size of the carriers' marginal route systems varies greatly, a striking similarity appears in the overall per-passenger subsidy cost for each carrier: 14/

TABLE 11

SUMMARY MARGINAL ROUTE COMPARISON

	Subsidy Need	Passengers	Subsidy Need Per Passenger
Air West	$7,291,000	305,000	$23.92
Allegheny	5,157,000	227,000	22.67
Frontier	11,001,000	518,000	21.23
Texas International	3,944,000	171,000	23.00

By historical standards, these are relatively high costs for Federal subsidization purposes; they also rule out any serious consideration of support from exclusively carrier-generated sources.

(3) In the course of preparing this study it became apparent that other than marginal operations (as defined herein) were experiencing substantial economic need in terms of gross dollars.15/ On average, however these operations either achieved

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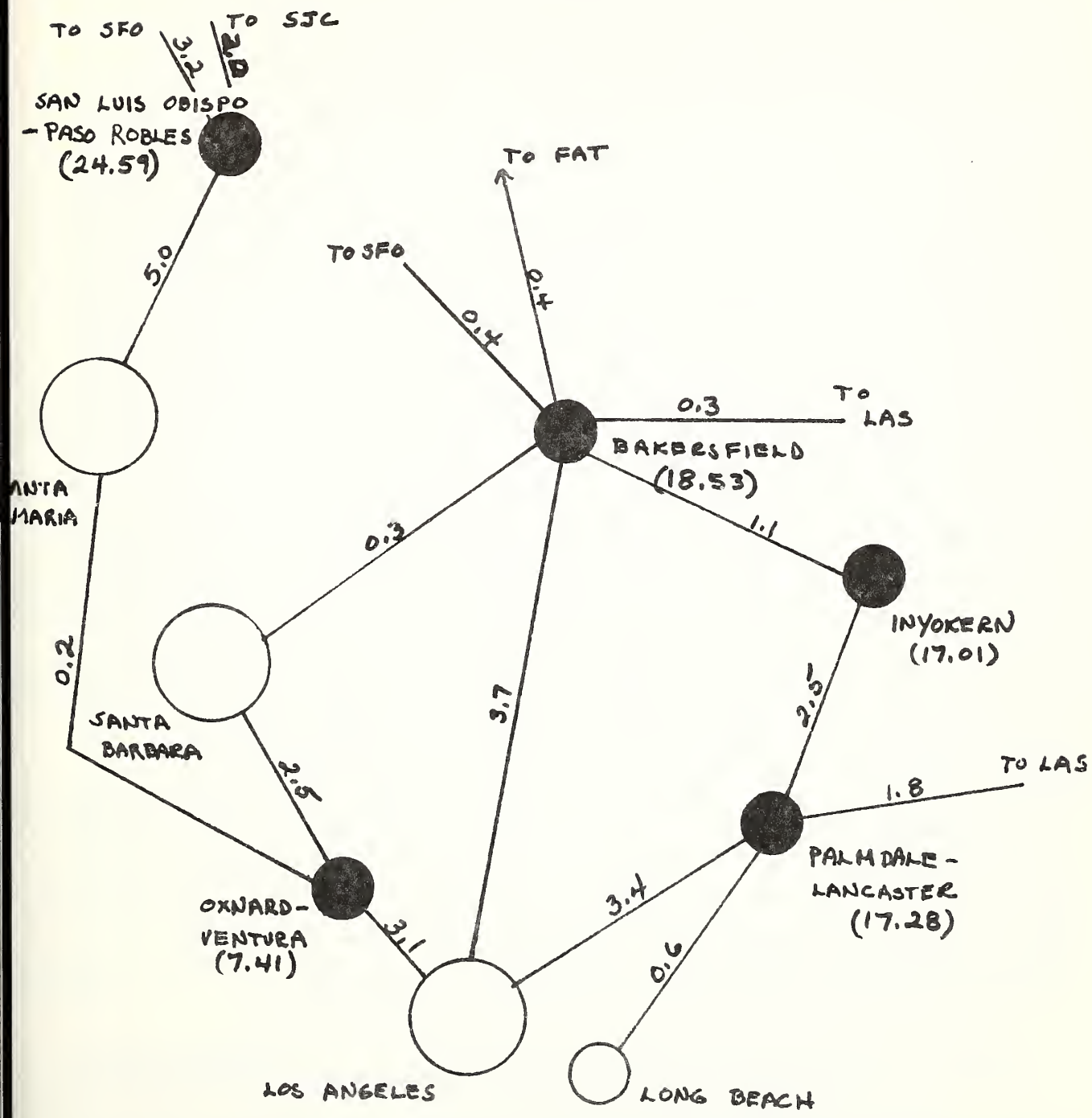
13/ Since June 30, 1971, Allegheny was suspended at Altoona, Pa. (Order 71-8-4, August 3, 1971) and Portsmouth, Ohio was deleted from the carrier's certificate effective August 9, 1971 (Order 71-6-129).
14/ See Appendix U for a more detailed comparison of the four carriers.
15/ Frontier appeared to be the exception to this with an economic need on the balance of its system of only $2.8 million compared to $11.1 million for the other operations of Air West, $8.5 million for Texas International, and $8.1 million for Allegheny.

MARGINAL ROUTE ANALYSIS A-1

BAKERSFIELD, OXNARD, SAN LUIS OBISPO PALMDALE, INYOKERN, CALIFORNIA

(Marginal points in black)



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) 1969 operations: F-27, 27A equipment. Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS A-1

SERVICE TO BAKERSFIELD, OXNARD, SAN LUIS OBISPO, PALMDALE, INYOKERN, CALIFORNIA

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Bakersfield						
-Fresno	101	132	0.4	1,114	3.1	8.4
-Inyokern	70	402	1.1	3,183	8.7	7.9
-Las Vegas	222	109	0.3	1,268	3.5	11.6
-Los Angeles	110	1,336	3.7	13,789	37.8	10.3
-San Francisco	240	133	0.4	1,331	3.6	10.0
-Santa Barbara	83	105	0.3	970	2.7	9.2
Oxnard						
-Los Angeles	50	1,115	3.1	15,821	43.3	14.2
-Santa Barbara	40	899	2.5	10,798	29.6	12.0
-Santa Maria	87	84	0.2	1,119	3.1	13.3
Palmdale						
-Inyokern	66	917	2.5	9,348	25.6	10.2
-Las Vegas	195	666	1.8	3,183	8.7	4.8
-Long Beach	64	237	0.6	654	1.8	2.8
-Los Angeles	56	1,254	3.4	20,811	57.0	16.6
San Luis Obispo						
-San Francisco	166	1,161	3.2	16,931	46.4	14.6
-San Jose	137	747	2.0	10,502	28.8	14.1
-Santa Maria	55	1,816	5.0	24,683	67.6	13.6
Other		452	1.2	2,044	5.6	4.5

Source: Special Air West reports to the Board.

MARGINAL ROUTE ANALYSIS A-1

SERVICE TO BAKERSFIELD, OXNARD, SAN LUIS OBISPO, PALMDALE, INYOKERN, CALIFORNIA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 970,000	$15.25	-
Aircraft operating expense	987,000	15.52	$1.02
Servicing	887,000	13.95	.91
Total operating expense	1,874,000	29.47	1.93
Operating loss	904,000	14.21	.93
Return and tax requirement	222,000	3.49	.23
Subsidy need	$1,126,000	$17.70	$1.16

Net effect of suspension/deletion at the five cities 2/

On-system revenue retained, net of expense	$ 20,000
Subsidy need decrease	$1,146,000

Statistics (1969 operations)

Aircraft departures 1/	8,611
Revenue miles 1/	633,415
O&D passengers	63,600
Revenue passenger miles	10,145,000

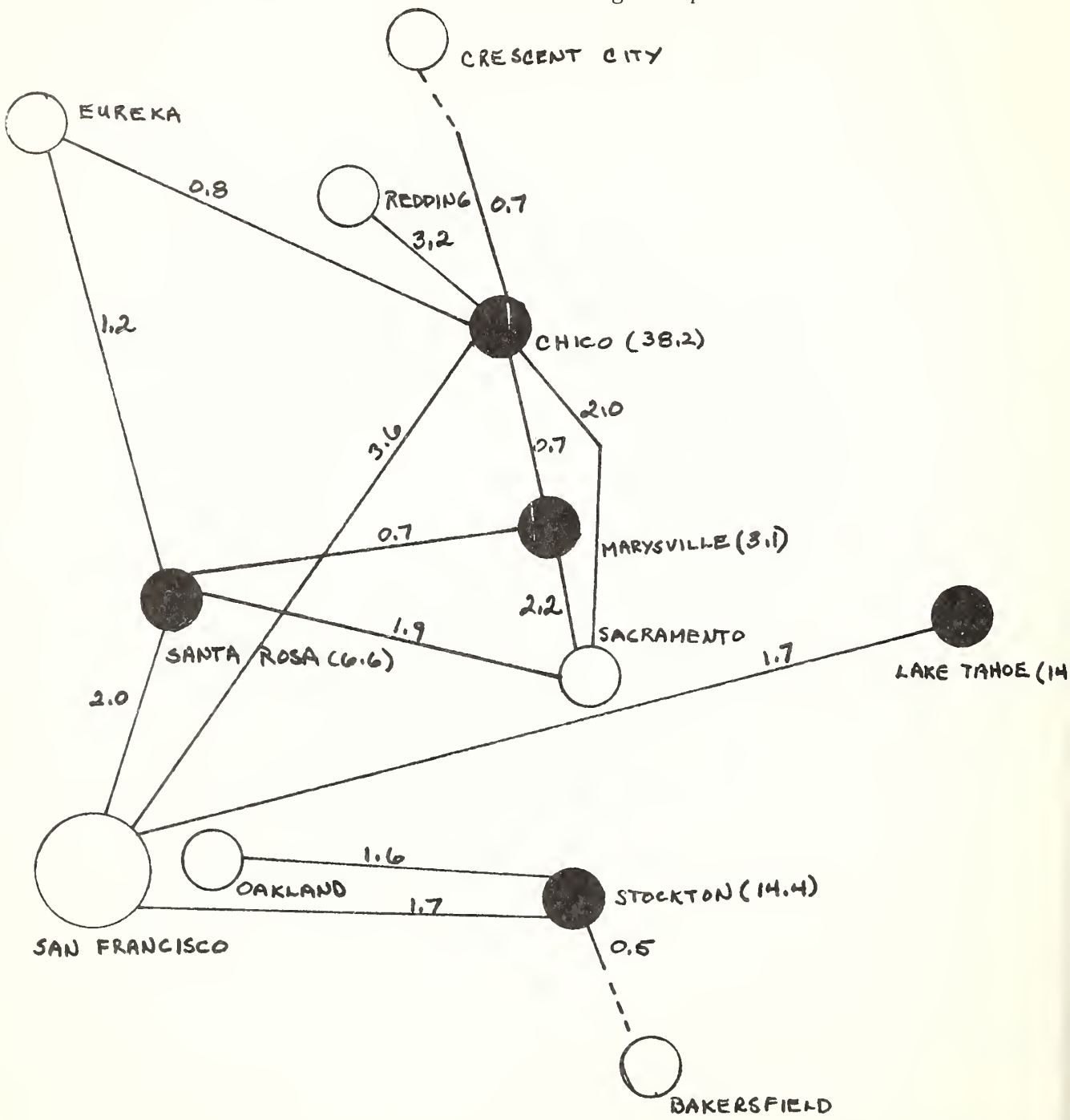
Additional Data

	1969 Station Expense(Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Bakersfield	$75,197	68,000	1938	Bakersfield, UAL
Oxnard/Ventura	47,225	127,000	1946	Santa Barbara, 27 miles
San Luis Obispo/ Paso Robles	49,486	35,000	1946	Santa Maria, 44 miles
Palmdale/Lancaster	62,257	35,000 3/	1956	Los Angeles, 50 mi.
Inyokern	39,242	1,000 3/	1962	Bakersfield, 93 miles

1/ Excludes certain flights operated primarily to service O&D traffic at other points.
2/ Assumes that a replacement carrier would operate Inyokern-Palmdale-Los Angeles (no provision made for support thereof by Air West); that existing air taxis would service San Luis Obispo and Oxnard; and that United would handle Bakersfield traffic.
3/ Includes certain 1960 data.

MARGINAL ROUTE ANALYSIS A-2
SERVICE TO CHICO, LAKE TAHOE, MARYSVILLE, SANTA ROSA, AND STOCKTON
CALIFORNIA

(Marginal points in black)



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) 1969 operations: F-27,27A equipment. Number of average daily flights operated shown on each segment.

(3) In December, 1970, Air West suspended operations at Marysville (Order 70-12-100).

(4) In November, 1970, Air West introduced a jet round trip operating Sacramento, Stockton, Las Vegas, Phoenix.

MARGINAL ROUTE ANALYSIS A-2

SERVICE TO CHICO, LAKE TAHOE, MARYSVILLE, SANTA ROSA, STOCKTON, CALIFORNIA

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Chico-Crescent City	185	263	.7	2,698	7.4	10.3
-Eureka	144	283	.8	4,431	12.1	15.7
-Redding	53	1,164	3.2	18,275	50.1	15.7
-Sacramento	77	723	2.0	18,511	50.7	25.6
-San Francisco	152	1,297	3.6	25,068	68.7	19.3
Lake Tahoe-San Francisco	156	630	1.7	10,708	29.3	17.0
Marysville-Chico	51	249	.7	4,347	11.9	17.5
-Sacramento	28	790	2.2	2,502	6.9	3.2
-San Francisco	112	130	.4	388	1.1	3.0
-Santa Rosa	79	269	.7	3,931	10.8	14.6
Santa Rosa-Eureka	184	421	1.2	5,441	14.9	12.9
-Sacramento	62	694	1.9	4,842	13.3	7.0
-San Francisco	65	729	2.0	5,972	16.4	8.2
Stockton-Bakersfield	202	187	.5	2,006	5.5	10.7
-Oakland	54	589	1.6	6,026	16.5	10.2
-San Francisco	65	628	1.7	6,194	17.0	9.9
Other	-	107	.3	1,119	3.1	10.5

Source: Special Air West reports to the Board.

MARGINAL ROUTE ANALYSIS A-2

SERVICE TO CHICO, LAKE TAHOE, MARYSVILLE, SANTA ROSA, STOCKTON, CALIFORNIA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 943,000	$15.86	-
Aircraft operating expense	1,013,000	17.04	$1.07
Servicing	870,000	14.63	.92
Total operating expense	1,883,000	31.67	1.99
Operating loss	940,000	15.81	.99
Return and tax requirement	224,000	3.77	.24
Subsidy need	$1,164,000	$19.58	$1.23

Net effect of suspension/deletion at the five cities 2/

On-system revenue retained, net of expense	$ 62,000
Subsidy need decrease	$1,226,000

Statistics (1969 operations)

Aircraft departures 1/	8,043
Revenue miles 1/	689,000
O&D passengers	59,458
Revenue passenger miles	9,196,000

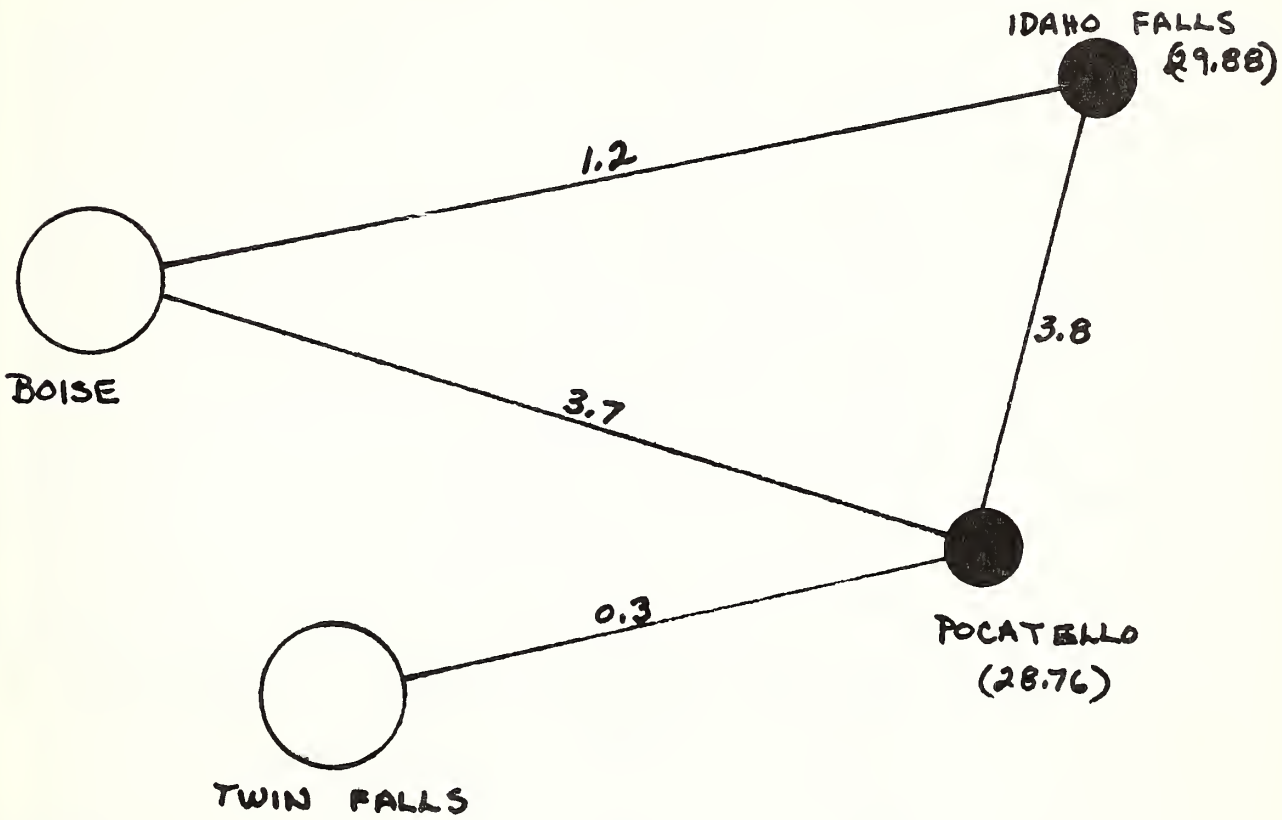
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Chico	$82,000	19,372	1947	Redding, 72 miles
Lake Tahoe	43,000	1,200 3/	1963	Reno, 33 miles
Marysville	35,000	22,879	1947	Sacramento, 43 miles
Santa Rosa	41,000	48,464	1947	San Francisco, 54 mil
Stockton	54,000	102,663	1946	Stockton, UAL

1/ Excludes certain flights operated primarily to service O&D traffic at other points.
2/ Assumes that existing intra-state and air taxi carriers will handle traffic at Lake Tahoe and Santa Rosa; United would service Stockton traffic; Marysville traffic would journey by surface to Sacramento; and, that a replacement carrier would service Chico on San Francisco-Chico and Sacramento-Chico-Redding routings. No estimate for subsidization of the Chico replacement service by Air West has been included. (See additional explanation of methodology, Appendix E).
3/ 1960 data.

MARGINAL ROUTE ANALYSIS A-3

SERVICE TO IDAHO FALLS, POCATELLO, IDAHO
(Marginal points in black)



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: F-27,27A equipment. Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS A-3

SERVICE TO IDAHO FALLS, POCATELLO, IDAHO

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Pocatello						
-Boise	189	1,343	3.7	28,927	79.3	21.5
-Idaho Falls	49	1,404	3.8	19,284	52.8	13.7
-Twin Falls	101	106	0.3	2,157	5.9	20.3
Idaho Falls						
-Boise	207	426	1.2	7,881	21.6	18.5
Other		56	0.2	467	1.3	8.3

Source: Special Air West reports to the Board.

MARGINAL ROUTE ANALYSIS A-3

SERVICE TO IDAHO FALLS, POCATELLO, IDAHO

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 915,000	$21.50	-
Aircraft operating expense	584,000	13.72	$ .64
Servicing	628,000	14.76	.69
Total operating expense	1,212,000	28.48	1.32
Operating loss	297,000	6.98	.32
Return and tax requirement	146,000	3.43	.16
Subsidy need	$ 443,000	$10.41	$ .48

Net effect of suspension/deletion at Idaho Falls and Pocatello 1/

On-system revenue retained, net of expense	$ 79,000
Subsidy need decrease	$522,000

Statistics (1969 operations)

Aircraft departures	3,335
Revenue miles	430,000
O&D passengers	42,560
Revenue passenger miles	12,922,000

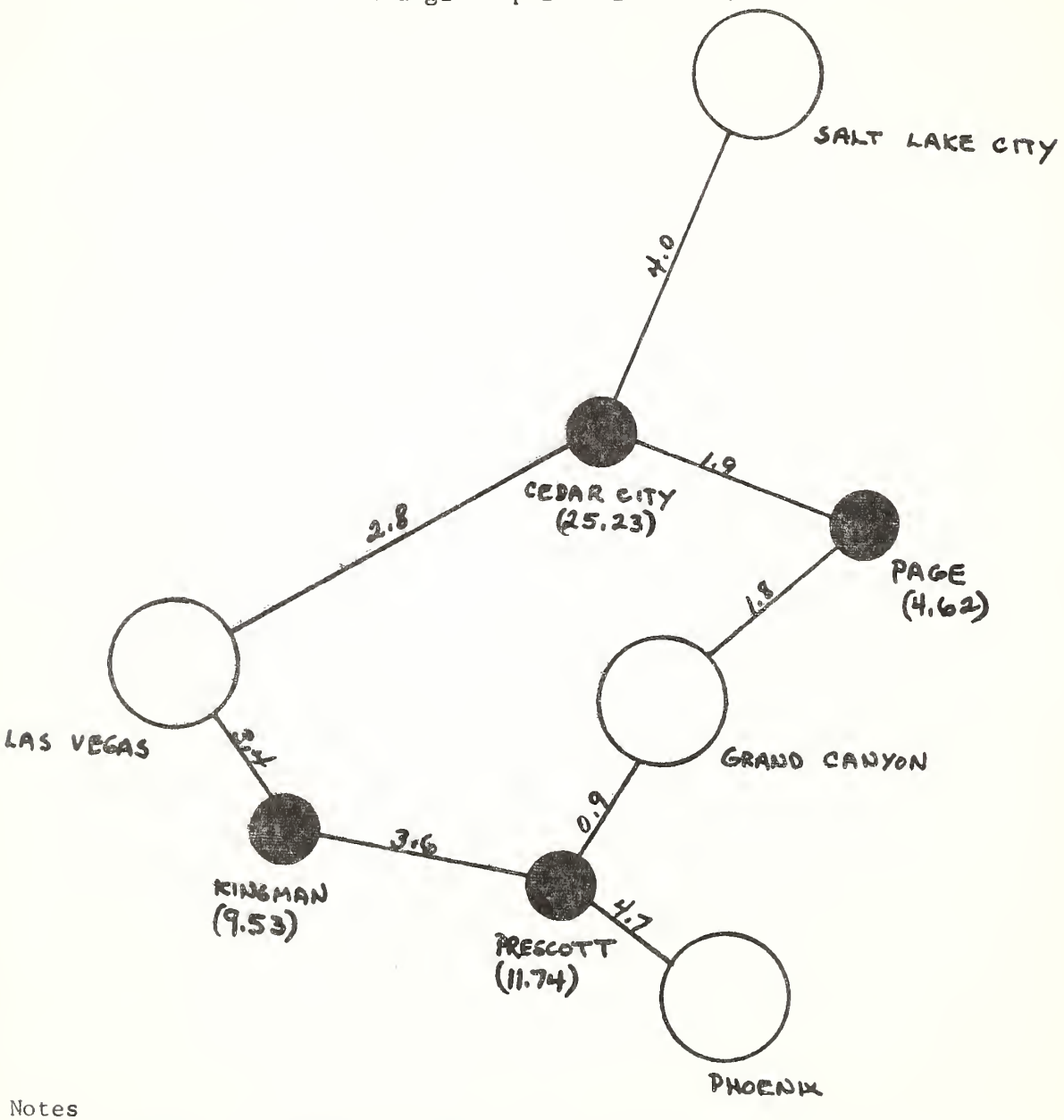
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Idaho Falls	$64,574	35,000	1938	Idaho Falls (WAL)
Pocatello	49,125	39,000	1938	Pocatello (WAL)

1/ Assumes traffic would be routed to Salt Lake City on Western and to Boise on Trans Magic Airlines.

MARGINAL ROUTE ANALYSIS A-4

SERVICE TO CEDAR CITY, UTAH, KINGMAN, PAGE, PRESCOTT, ARIZONA
(Marginal points in black)



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) 1969 operations: F-27,27A equipment. Number of average daily flights operated shown on each segment.

(3) Air West suspension at Kingman and Prescott approved in September, 1970 (Order 70-9-84) subject to provision of replacement service by Apache Airlines.

MARGINAL ROUTE ANALYSIS A-4

SERVICE TO CEDAR CITY, UTAH; KINGMAN, PAGE, PRESCOTT, ARIZONA

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Cedar City						
-Las Vegas	161	1,030	2.8	10,427	28.6	10.1
-Page	107	685	1.9	6,341	17.4	9.3
-Salt Lake City	222	1,472	4.0	17,583	48.1	11.9
Kingman						
-Las Vegas	88	1,242	3.4	12,554	34.4	10.1
-Prescott	96	1,307	3.6	14,358	39.3	11.0
-						
Page						
-Grand Canyon	78	661	1.8	5,746	15.7	8.7
Prescott						
-Grand Canyon	91	316	0.9	4,133	11.3	13.1
-Phoenix	87	1,719	4.7	21,224	58.1	12.3
Other		135	0.4	1,481	4.1	11.0

Source: Special Air West reports to the Board.

MARGINAL ROUTE ANALYSIS A-4

SERVICE TO CEDAR CITY, UTAH; KINGMAN, PAGE, PRESCOTT, ARIZONA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 730,000	$19.73	-
Aircraft operating expense	$1,192,000	32.22	$1.63
Servicing	705,000	19.05	.97
Total operating expense	1,897,000	51.27	2.60
Operating loss	1,167,000	31.54	1.60
Return and tax requirement	293,000	7.92	.40
Subsidy need	$1,460,000	$39.46	$2.00

Net effect of suspension/deletion at the four cities 2/

On-system revenue retained, net of expense	$ 45,000
Subsidy need decrease	$1,505,000

Statistics (1969 operations)

Aircraft departures 1/	8,082
Revenue miles 1/	832,445
O&D passengers	37,000
Revenue passenger miles	8,304,000

Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Cedar City	$64,293	9,000	1946	Las Vegas, 181 miles
Kingman	39,226	7,000	1949	Las Vegas, 99 miles
Page	39,462	3,000 3/	1959	Grand Canyon, 138 mi
Prescott	53,551	13,000	1949	Phoenix, 98 miles

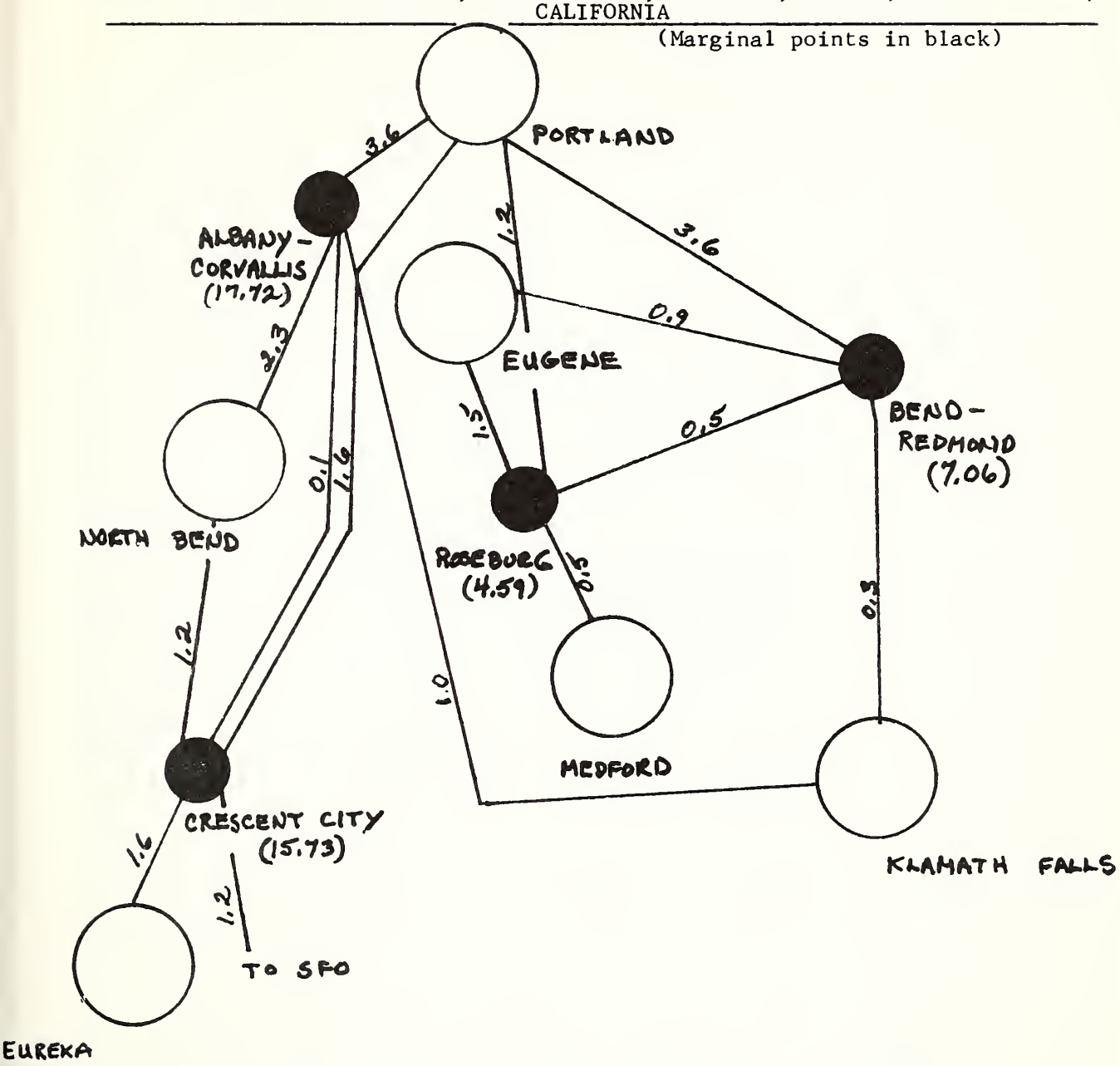
1/ Excludes certain flights operated primarily to service O&D traffic at other points.

2/ Assumes replacement carriers would operate Las Vegas-Kingman-Prescott-Phoenix (Apache Airlines); Salt Lake City-Cedar City-Page-Grand Canyon; Las Vegas-Cedar City. No provision included for support of such services by Air West.

3/ 1960 data.

MARGINAL ROUTE ANALYSIS A-5
SERVICE TO ALBANY-CORVALIS, BEND-REDMOND, ROSEBURG, OREGON; CRESCENT CITY, CALIFORNIA

(Marginal points in black)



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) 1969 operations: F-27,27A, Navajo equipment. Number of average daily flights operated shown on each segment.

(3) In February, 1970, Air West replaced the Navajo operations at Roseburg with F-27 aircraft.

MARGINAL ROUTE ANALYSIS A-5

SERVICE TO ALBANY-CORVALLIS, BEND REDMOND, ROSEBURG, OREGON; CRESCENT CITY, CALIFORNIA

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Albany-Corvallis						
-Crescent City	193	44	0.1	319	0.9	7.3
-Klamath Falls	179	361	1.0	6,010	16.5	16.6
-North Bend	89	848	2.3	14,451	39.6	17.0
-Portland	83	1,327	3.6	21,765	59.6	16.4
Bend						
-Eugene	103	315	0.9	554	1.5	1.8
-Klamath Falls	148	110	0.3	1,687	4.6	15.3
-Portland	118	1,320	3.6	5,553	15.2	4.2
-Roseburg	131	196	0.5	405	1.1	2.1
Crescent City						
-Eureka	56	593	1.6	8,814	24.1	14.9
-North Bend	113	430	1.2	6,147	16.8	14.3
-Portland	277	575	1.6	7,728	21.2	13.4
-San Francisco	304	445	1.2	8,258	22.6	18.6
Roseburg						
-Eugene	61	534	1.5	971	2.7	1.8
-Medford	131	196	0.5	405	1.1	2.1
-Portland	168	452	1.2	991	2.7	2.2
Other		501	1.4	7,630	20.9	15.2

Source: Special Air West reports to the Board

MARGINAL ROUTE ANALYSIS A-5

SERVICE TO ALBANY-CORVALIS, BEND-REDMOND, ROSEBURG, OREGON;
CRESCENT CITY, CALIFORNIA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 727,000	$20.65	-
Aircraft operating expense	963,000	27.36	$1.32
Servicing	563,000	15.99	.78
Total operating expense	1,526,000	43.35	2.10
Operating loss	799,000	22.70	1.10
Return and tax requirement	167,000	4.74	.23
Subsidy need	$ 966,000	$27.44	$1.33

Net effect of suspension/deletion at the four cities 2/

On-system revenue retained, net of expense	$ 205,000
Subsidy need decrease	$1,171,000

Statistics (1969 operations)

Aircraft departures 1/	7,441
Revenue miles 1/	899,000
O&D passengers	35,200
Revenue passenger miles	9,835,000

Additional Data

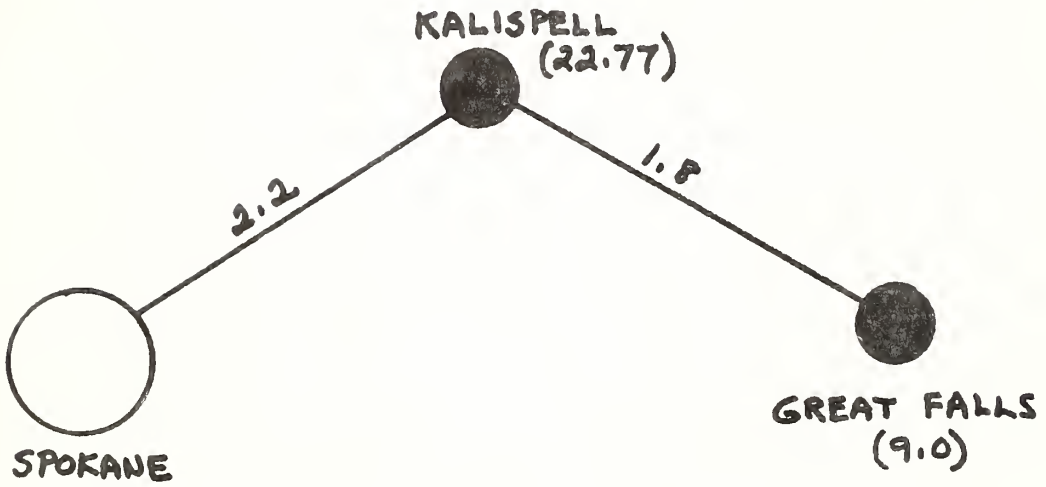
	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Albany-Corvalis	$45,983	53,000	1947	Eugene, 42 miles
Bend-Redmond	34,846	17,000	1946	Eugene, 132 miles
Crescent City	44,554	3,000	1948	Eureka, 84 miles
Roseburg	27,309	14,000	1951	Eugene, 70 miles

1/ Excludes certain flights operated primarily to service O&D traffic to other points.

2/ Assumes that replacement carriers would operate Eureka-Crescent City-Medford-Roseburg-Eugene; Portland-Bend (no provision included for support thereof by Air West). Assumes Corvalis traffic would journey by surface to Eugene.

MARGINAL ROUTE ANALYSIS A-6

SERVICE TO GREAT FALLS, KALISPELL, MONTANA
(Marginal points in black)



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: F-27,27A equipment. Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS A-6

SERVICE TO GREAT FALLS, KALISPELL, MONTANA

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Kalispell						
-Spokane	159	807	2.2	11,671	32.0	14.5
-Great Falls	146	653	1.8	6,718	18.4	10.3
Other		26	0.1	199	0.5	7.7

Source: Special Air West reports to the Board.

MARGINAL ROUTE ANALYSIS A-6

SERVICE TO GREAT FALLS, KALISPELL, MONTANA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$340,000	$19.77	-
Aircraft operating expense	303,000	17.62	$ .89
Servicing	251,000	14.59	.74
Total operating expense	554,000	32.21	1.63
Operating loss	214,000	12.44	.63
Return and tax requirement	77,000	4.48	.23
Subsidy need	$291,000	$16.92	$ .86

Net effect of suspension/deletion at Great Falls and Kalispell 1/

On-system revenue retained, net of expense	$ 18,000
Subsidy need decrease	$309,000

Statistics (1969 operations)

Aircraft departures	1,486
Revenue miles	231,000
O&D passengers	17,200
Revenue passenger miles	4,213,000

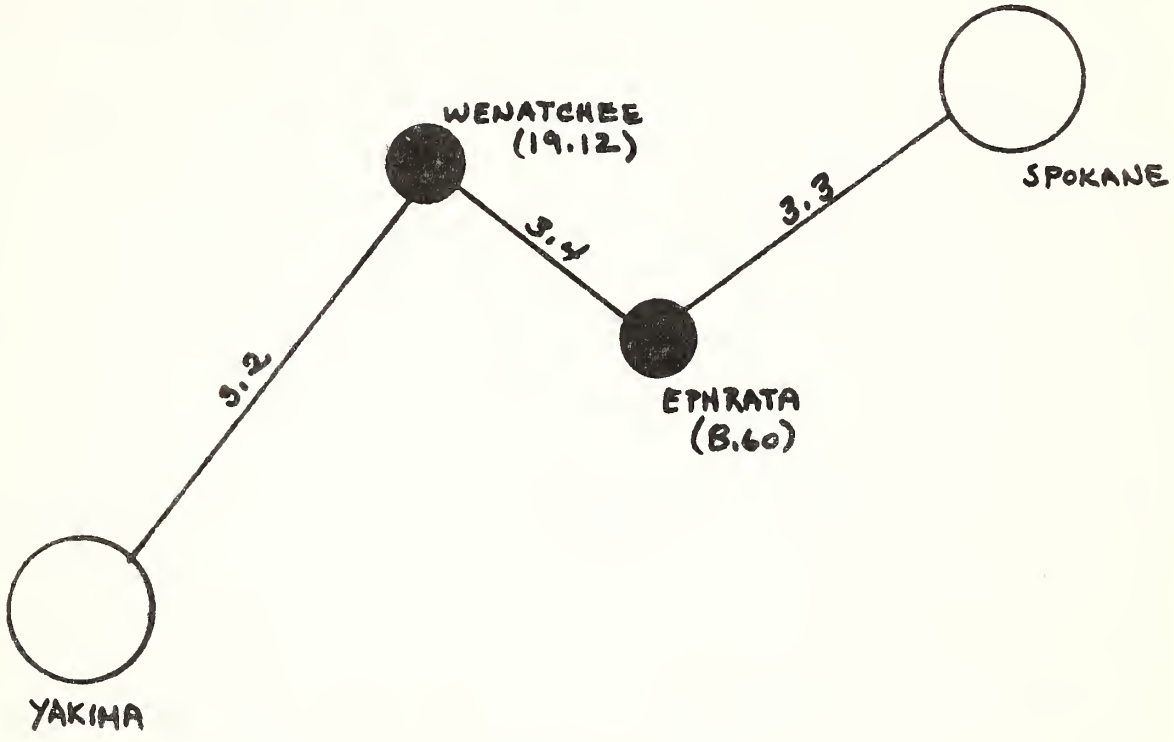
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Great Falls	$19,900	59,000	1938	Great Falls (FL,NW,WA
Kalispell	37,425	10,000	1947	Missoula, 123 miles

1/ Assumes a replacement carrier would operate Spokane-Kalispell-Great Falls (no provision included for support thereof by Air West).

MARGINAL ROUTE ANALYSIS A-7

SERVICE TO EPHRATA, WENATCHEE, WASHINGTON
(Marginal points in black)



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: F-27,27A equipment. Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS A-7

SERVICE TO EPHRATA, WENATCHEE, WASHINGTON

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Wenatchee						
-Yakima	59	1,159	3.2	22,091	60.5	19.1
-Ephrata	32	1,235	3.4	14,262	39.1	11.5
Ephrata						
-Spokane	95	1,211	3.3	11,206	30.7	9.3
Other		114	0.3	1,238	3.4	10.9

Source: Special Air West reports to the Board

MARGINAL ROUTE ANALYSIS A-7

SERVICE TO EPHRATA, WENATCHEE, WASHINGTON

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$329,000	$16.05	-
Aircraft operating expense	337,000	19.07	$1.19
Servicing	391,000	16.44	1.02
Total operating expense	728,000	35.51	2.21
Operating loss	399,000	19.46	1.21
Return and tax requirement	88,000	4.29	.27
Subsidy need	$487,000	$23.76	$1.48

Net effect of suspension/deletion at Ephrata and Wenatchee 1/

On-system revenue retained, net of expense	$ 17,000
Subsidy need decrease	$504,000

Statistics (1969 operations)

Aircraft departures	3,739
Revenue miles	239,400
O&D passengers	20,500
Revenue passenger miles	3,748,000

Additional Data

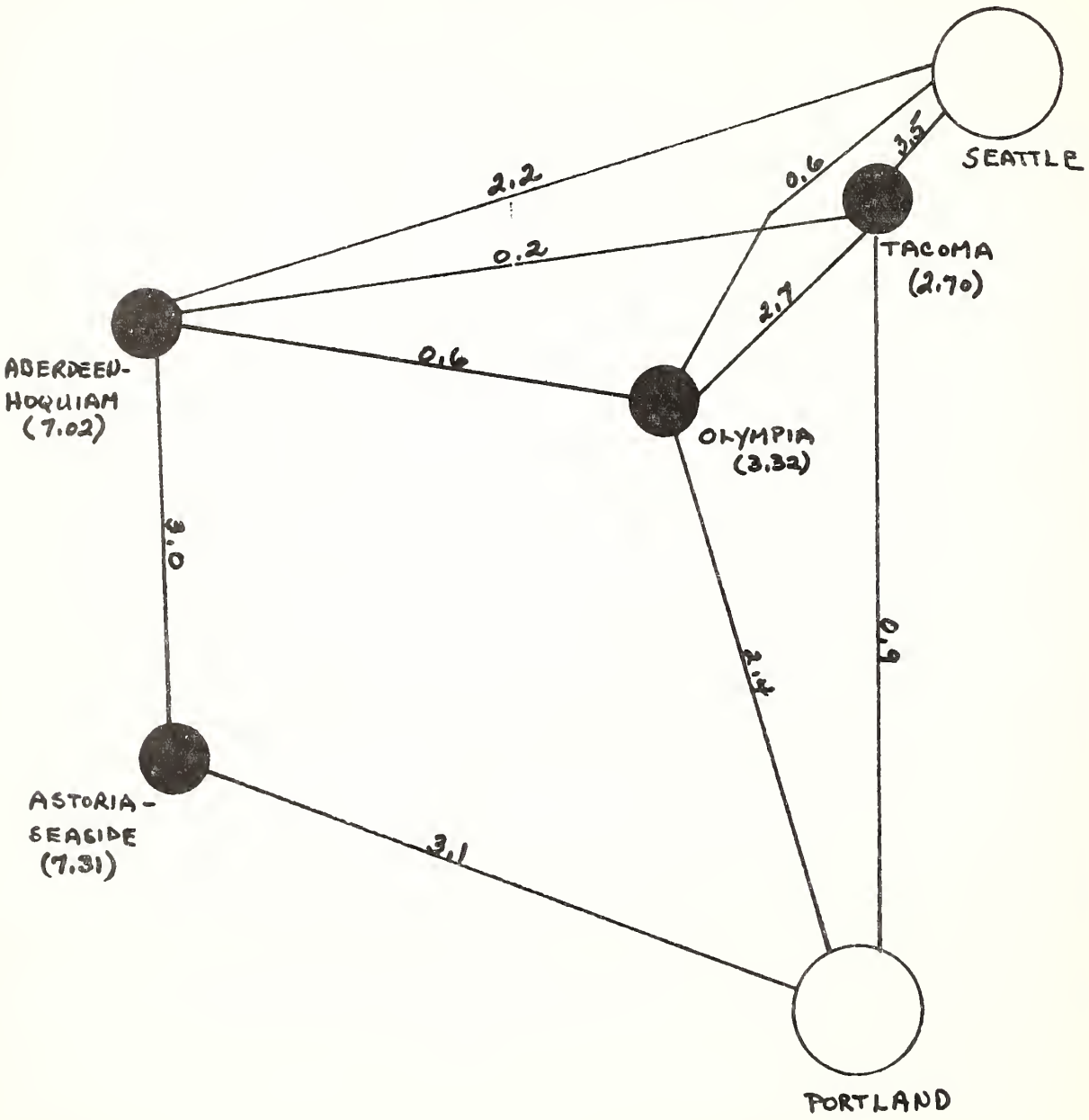
	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Ephrata/Moses Lake	$46,165	15,000	1952	Yakima, 96 miles
Wenatchee	41,575	17,000	1938	Yakima, 126 miles

1/ Assumes that a replacement carrier would operate Seattle-Wenatchee-Ephrata-Spokane (no provision included for support thereof by Air West).

MARGINAL ROUTE ANALYSIS A-8

SERVICE TO ASTORIA, HOQUIAM, OLYMPIA, TACOMA, WASHINGTON

(Marginal points in black)



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) 1969 operations: F-27,27A, Navajo equipment. Number of average daily flights operated shown on each segment.

(3) In February, 1970, Air West replaced the Navajo operations at Olympia and Tacoma with F-27 equipment.

MARGINAL ROUTE ANALYSIS A-8

SERVICE TO ASTORIA, HOQUIAM, OLYMPIA, TACOMA, WASHINGTON

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Aberdeen						
-Astoria	55	1,091	3.0	7,182	19.7	6.6
-Olympia	49	230	0.6	1,264	3.5	5.5
-Seattle	86	790	2.2	5,523	15.1	7.0
-Tacoma	68	91	0.2	355	1.0	3.9
Astoria						
-Portland	72	1,123	3.1	7,506	20.6	6.7
Olympia						
-Portland	96	887	2.4	6,133	16.8	6.9
-Seattle	47	202	0.6	1,033	2.8	5.1
-Tacoma	26	983	2.7	6,087	16.7	6.2
Tacoma						
-Portland	116	316	0.9	3,360	9.2	10.6
-Seattle	22	1,289	3.5	8,793	24.1	6.8
Other		140	0.4	1,000	2.7	7.1

Source: Special Air West reports to the Board.

MARGINAL ROUTE ANALYSIS A-8

SERVICE TO ASTORIA, HOQUIAM, OLYMPIA, TACOMA, WASHINGTON

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$255,000	$16.48	-
Aircraft operating expense	681,000	44.02	$2.67
Servicing	311,000	20.10	1.22
Total operating expense	992,000	64.12	3.89
Operating loss	737,000	47.64	2.89
Return and tax requirement	146,000	9.44	.57
Subsidy need	$883,000	$57.08	$3.46

Net effect of suspension/deletion at the four cities 1/

On-system revenue retained, net of expense	$ 33,000
Subsidy need decrease	$916,000

Statistics (1969 operations)

Aircraft departures	7,052
Revenue miles	417,704
O&D passengers	15,470
Revenue passenger miles	2,750,000

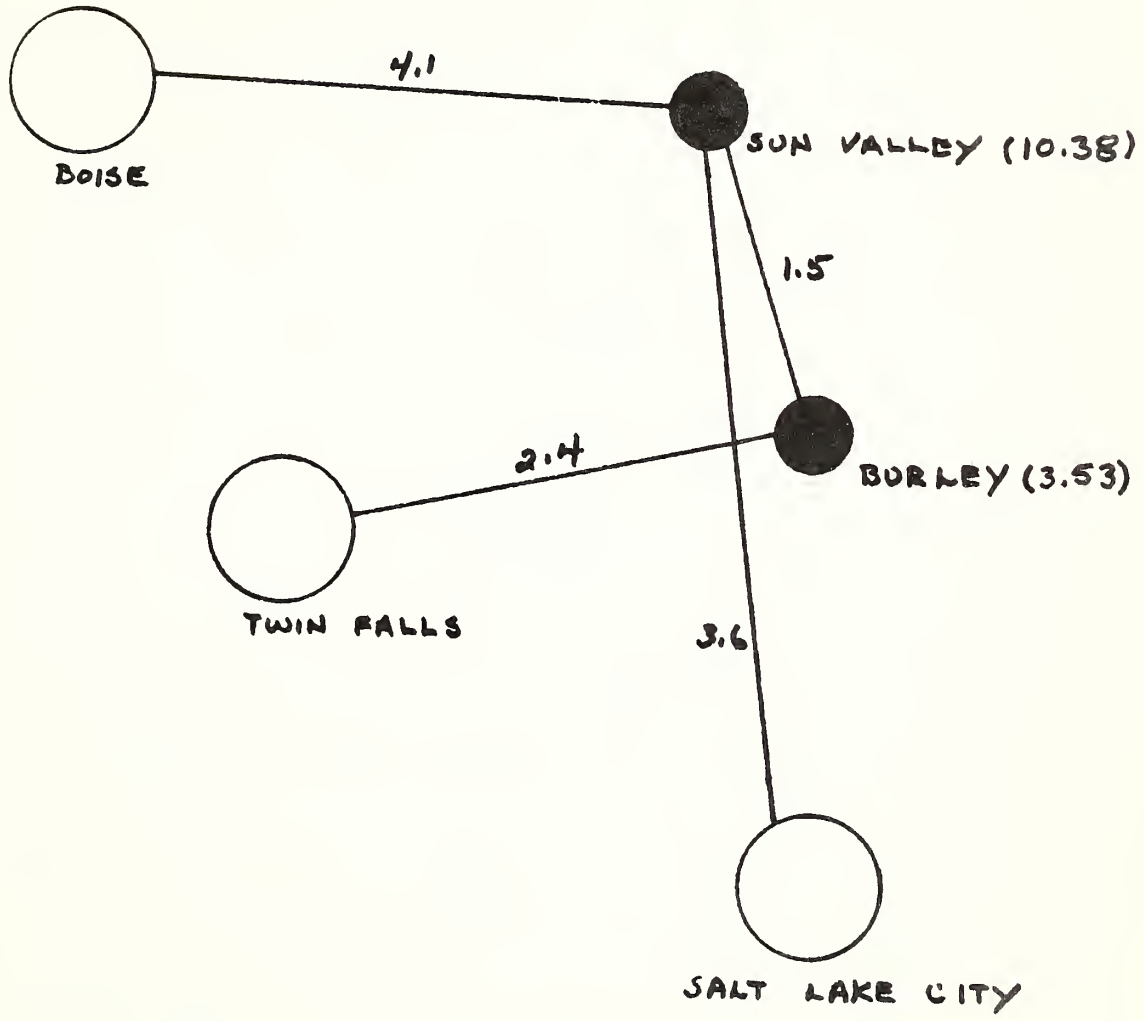
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Astoria/Seaside	$30,640	15,000	1946	Portland, 89 miles
Aberdeen/Hoquiam	28,476	29,000	1946	Seattle, 112 miles
Olympia	32,843	22,000	1946	Seattle, 64 miles
Tacoma	54,149	151,000	1963	Seattle, 36 miles

1/ Assumes that replacement services would operate Seattle-Hoquiam-Astoria-Portland, and Seattle-Olympia-Portland (no provision has been included for support thereof by Air West). Assumes that Tacoma traffic would journey by surface to Seattle.

MARGINAL ROUTE ANALYSIS A-9

SERVICE TO BURLEY, SUN VALLEY, IDAHO
(Marginal points in black)



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: Navajo equipment. Number of average daily flights operated shown on each segment.
(3) Air West suspension at Burley and Sun Valley approved in December, 1969 (Order 69-12-94) subject to provision of service by air taxis.

MARGINAL ROUTE ANALYSIS A-9

BURLEY, SUN VALLEY, IDAHO

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Sun Valley						
-Boise	96	1,497	4.1	3,241	8.9	2.2
-Burley	72	565	1.5	628	1.7	1.1
-Salt Lake City	224	1,306	3.6	4,191	11.5	3.2
Burley						
-Twin Falls	37	884	2.4	722	2.0	0.8
Other		85	0.2	216	0.6	2.5

Source: Special Air West reports to the Board

MARGINAL ROUTE ANALYSIS A-9

SERVICE TO BURLEY, SUN VALLEY, IDAHO

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$183,000	$21.53	-
Aircraft operating expense	367,000	43.18	$2.01
Servicing	120,000	14.12	.66
Total operating expense	487,000	57.29	2.66
Operating loss	304,000	35.76	1.66
Return and tax requirement	16,000	1.88	.09
Subsidy need	$320,000	$37.65	$1.75

Net effect of suspension/deletion at Burley and Sun Valley 1/

On-system revenue retained, net of expense	$ 13,000
Subsidy need decrease	$333,000

Statistics (1969 operations)

Aircraft departures	4,338
Revenue miles	522,000
O&D passengers	8,500
Revenue passenger miles	2,089,000

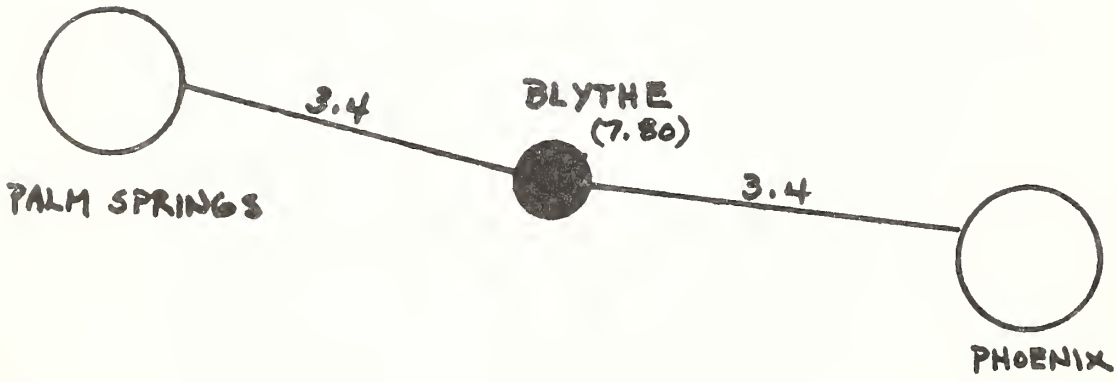
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Burley/Rupert	$26,664	13,000	1946	Twin Falls, 45 mi.
Sun Valley/Hailey/ Ketchum	29,611	3,000	1960	Twin Falls, 82 mi.

1/ Assumes that existing air taxis would service the traffic to Boise, Salt Lake City and Twin Falls.

MARGINAL ROUTE ANALYSIS A-10

SERVICE TO BLYTHE, CALIFORNIA
(Marginal points in black)



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: F-27, 27A equipment. Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS A-10

SERVICE TO BLYTHE, CALIFORNIA

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Blythe						
-Palm Springs	105	1,229	3.4	16,952	46.4	13.8
-Phoenix	155	1,240	3.4	15,150	41.5	12.2
Other		8	0.02	80	0.2	10.0

Source: Special Air West reports to the Board

MARGINAL ROUTE ANALYSIS A-10

SERVICE TO BLYTHE, CALIFORNIA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 96,000	$16.70	-
Aircraft operating expense	47,000	8.18	$ .49
Servicing	98,000	17.05	1.02
Total operating expense	145,000	25.22	1.51
Operating loss	49,000	8.52	.51
Return and tax requirement	6,000	1.04	.06
Subsidy need	$ 55,000	$ 9.57	$ .57

Net effect of suspension/deletion at Blythe 2/

On-system revenue retained, net of expense	$ 2,000
Subsidy need decrease	$57,000

Statistics (1969 operations)

Aircraft departures 1/	1,246
Revenue miles 1/	3,047
O&D passengers	5,749
Revenue passenger miles	1,104,000

Additional Data

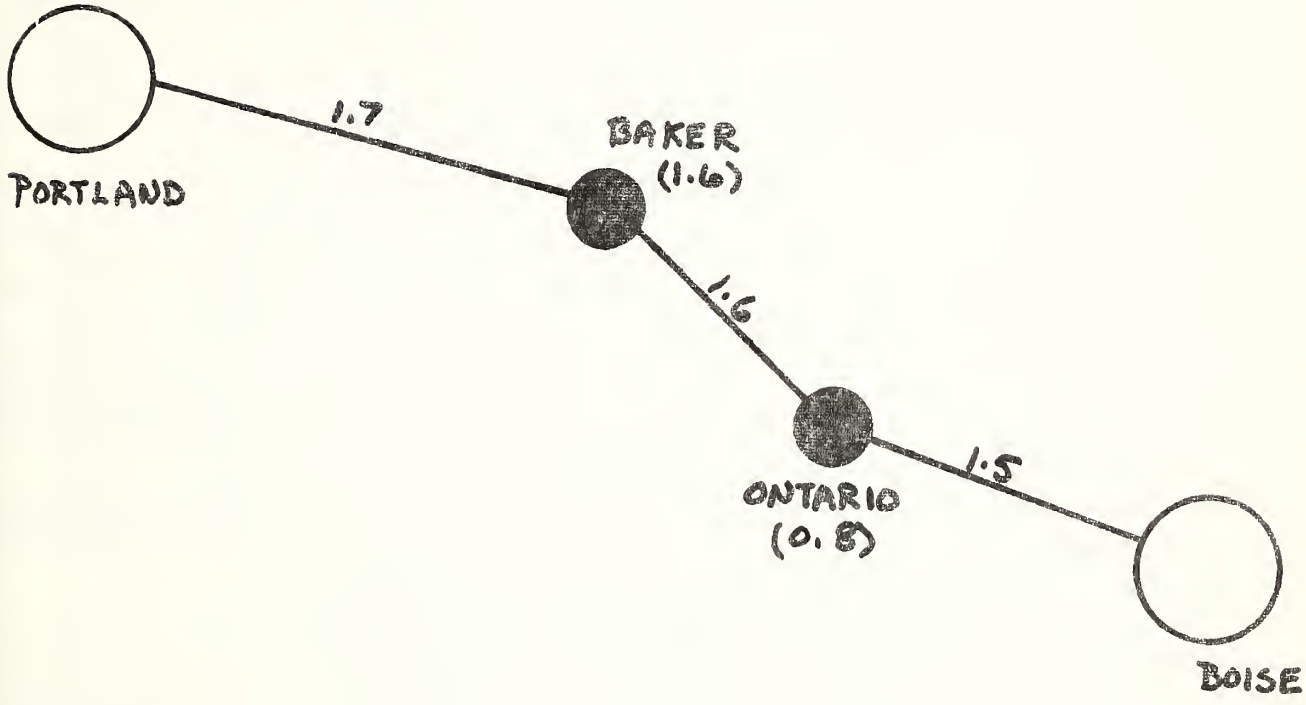
	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Blythe	$44,073	7,000	1952	Yuma, 108 miles

1/ Excludes certain flights operated primarily to service O&D traffic at other points.

2/ Assumes extension of existing Los Angeles-Palm Springs air taxi route to Blythe and Phoenix (no provision included for support thereof by Air West).

MARGINAL ROUTE ANALYSIS A-11

SERVICE TO BAKER AND ONTARIO, OREGON
(Marginal points in black)



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: Navajo equipment. Number of average daily flights operated shown on each segment.
(3) In February, 1970, Air West replaced the Navajo operations at Baker and Ontario with F-27 aircraft.

MARGINAL ROUTE ANALYSIS A-11

SERVICE TO BAKER AND ONTARIO, OREGON

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Baker-Ontario	69	592	1.6	767	2.1	1.3
-Portland	239	618	1.7	1,600	4.4	2.6
Ontario-Boise	51	555	1.5	309	.8	.6
Other		25	.1	32	.1	1.3

Source: Special Air West reports to the Board.

MARGINAL ROUTE ANALYSIS A-11

SERVICE TO BAKER, ONTARIO, OREGON

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 43,000	$22.04	-
Aircraft operating expense	157,000	80.47	$3.65
Servicing	34,000	17.43	.79
Total operating expense	191,000	97.90	4.44
Operating loss	148,000	75.86	3.44
Return and tax requirement	7,000	3.59	.16
Subsidy need	$155,000	$79.45	$3.60

Net effect of suspension/deletion at Baker and Ontario 1/

On-system revenue retained, net of expense	$ 13,000
Subsidy need decrease	$168,000

Statistics (1969 operations)

Aircraft departures	1,790
Revenue miles	222,261
O&D passengers	1,951
Revenue passenger miles	512,000

Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since:	Closest Remaining Certificated Point
Baker	$26,000	9,235	1946	Pendleton, 95 miles
Ontario, Ore./ Payette, Idaho	30,000	10,930	1946	Boise, 56 miles

1/ Assumes that a replacement air taxi service would operate Walla Walla-Baker-Ontario-Boise, but does not include any estimate for subsidization thereof by Air West. (See additional explanation of methodology, Appendix E).

CITIES INCLUDED IN AIR WEST'S 1969 MARGINAL ROUTES

Station	Average Daily Originating Passengers	Daily Departures	Equipment
Aberdeen/Hoquiam, Wash.	7.02	3.0	F-27/27A
Albany/Corvallis, Oreg.	17.72	4.0	F-27/27A
Astoria/Seaside, Oreg.	7.31	3.0	F-27/27A
Baker, Oreg.	1.58	1.6	PA-31
Bakersfield, Calif.	18.53	3.3	F-27/27A
Bend/Redmond, Oreg.	7.08	2.7	F-27/27A, PA-31
Blythe, Calif.	7.80	3.3	F-27/27A
Burley/Rupert, Idaho 1/	1.55	2.0	PA-31
Cedar City, Utah	25.23	4.4	F-27/27A
Chico, Calif.	38.34	5.5	F-27/27A
Crescent City, Calif.	15.73	3.3	F-27/27A
Ephrata/Moses Lake, Wash.	8.60	3.5	F-27/27A
Great Falls, Mont.	9.00	.9	F-27/27A
Idaho Falls, Idaho	29.88	2.7	F-27/27A
Inyokern, Calif.	17.01	1.8	F-27/27A
Kalispell, Mont.	22.77	1.9	F-27/27A
Kingman, Ariz. 2/	9.53	3.5	F-27/27A
Lake Tahoe, Calif.	14.03	.8	F-27A
Marysville/Yuba City, Calif. 3/	3.10	1.9	F-27/27A
Olympia, Wash.	3.32	2.9	F-27/27A
Ontario, Oreg./Payette, Idaho	.80	1.3	PA-31
Oxnard/Ventura, Calif.	7.41	2.9	F-27/27A
Page, Ariz.	4.62	1.9	F-27A
Palmdale/Lancaster, Calif.	17.28	4.0	F-27/27A
Pocatello, Idaho	28.76	4.1	F-27/27A
Prescott, Ariz. 2/	11.74	4.6	F-27/27A
Roseburg, Oreg.	4.59	2.3	PA-31
San Luis Obispo/Paso Robles, Calif.	24.59	5.2	F-27/27A
Santa Rosa, Calif.	6.55	2.9	F-27/27A
Stockton, Calif.	14.38	2.0	F-27/27A
Sun Valley/Hailey/Ketchum, Idaho 1/	10.38	4.5	PA-31
Tacoma, Wash.	2.70	3.0	F-27/27A,PA-31
Wenatchee, Wash.	19.12	3.5	F-27/27A

1/ Service suspended 12-23-69 by Air West and transferred to air taxi operators.
2/ Air West suspension approved 9-16-70. Apache Airlines providing replacement service.
3/ Air West suspension approved 12-17-70.
Source: Appendix A; Form 41's.

CITIES ORIGINATING FEWER THAN 40 DAILY PASSENGERS
BUT NOT INCLUDED IN AIR WEST'S MARGINAL ROUTES

Station	Key	Daily Originating Passengers	Daily Departures	Equipment
Calgary, Canada	1/ 3/	27.1	1.1	DC-9-10/30,F-27
La Paz, Mexico	1/ 3/	5.9	1.0	DC-9-10/30
Long Beach, Calif.	2/	5.0	.9	F-27/27A
Mazatlan, Mexico	1/ 3/	6.2	1.0	DC-9-10/30
North Bend/Coos Bay	4/	36.5	4.2	F-27/27A
Oakland, Calif.	2/	7.0	3.4	F-27/27A
Puerto Vallarta, Mexico	1/ 3/	4.0	.5	DC-9-10/30
Riverside, Calif.	2/	7.7	2.5	F-27A

Key to exclusion from marginal system:

1/ Jet operations.
2/ Satellite airport (Riverside hyphenated with Ontario).
3/ Foreign city.
4/ Services to city produced an operating profit.

NON-HUB CITIES ORIGINATING 40 OR MORE AIR WEST PASSENGERS PER DAY

	Daily Originating Passengers	Daily Departures	Equipment
El Centro, Calif.	59.46	7.7	F-27/27A
Eureka/Arcata, Calif.	139.51	6.9	F-27/27A,DC-9-10/30
Grand Canyon, Ariz.	74.34	5.6	F-27A
Indio/Palm Springs, Calif.	73.54	6.9	F-27/27A
Klamath Falls, Ore.	44.78	5.2	F-27/27A
Lewiston, Idaho/Clarkston, Wash.	61.06	8.7	F-27/27A,DC-9-30
Pasco/Kennewick/Richland, Wash.	131.75	14.2	F-27/27A,DC-9-10/30
Pullman, Wash./Moscow, Idaho	47.86	7.2	F-27/27A
Red Bluff/Redding, Calif.	55.36	5.2	F-27/27A
Santa Ana/Laguna Beach, Calif.	229.03	8.0	F-27/27A,DC-9-10/30
Santa Maria, Calif.	77.13	5.4	F-27/27A
Twin Falls, Idaho	55.58	7.3	F-27A,DC-9-10/30
Walla Walla, Wash.	46.62	8.4	F-27/27A
Yuma, Ariz.	82.19	9.3	F-27/27A

DESCRIPTION OF COSTING METHODOLOGY

Developing the operating and subsidy-need results of a marginal route involved a determination of costs incurred (or saved, assuming termination of service to the various points) vs. the commercial revenues generated (or lost).

As a first step, we obtained on-line O&D passenger traffic by market for 1969 for each of the 33 marginal route cities shown in Appendices A and B, using special reports furnished by Air West. We priced this traffic on the basis of fares in effect December 1, 1969, summed the results by city, and applied an appropriate dilution factor for discount fares. Duplicated traffic was eliminated where necessary to arrive at totals for each marginal route and for all eleven routes. We developed cargo ton miles and revenues for each station on the basis of tonnages reported in Form 41.

All costs--aircraft operating, servicing, and return and tax requirements--were based on Air West experience per Local Service Air Carriers' Unit Costs (Subpart K) for the year ended September 30, 1969.[1/] For simplicity and realism in costing, and to avoid excessive cost allocations in view of the large number of cities involved, we costed by route, rather than by each individual city. Routes were set up in accordance with actual 1969 flight scheduling rather than on the basis

1/ In a few instances, special material furnished by Air West was used where the requisite data to apply Subpart K were not available.

of descriptions in the carrier's certificates. However, we consolidated into single routes certain spoke operations in both the Los Angeles and San Francisco regions (see Appendices A-1 and A-2).

If Air West operated a flight only for the specific purpose of serving a marginal route(as defined in section 2.3 of the accompanying memorandum), the flight's costs were fully charged to the route. Where a flight served a marginal point as an adjunct to services which would have to be provided in any event, only the difference between direct costs of the flight as operated and as it would operate with the city deleted was charged to the marginal route (circuity costing).

For example, we determined that certain flights serving Santa Rosa on a Eureka-Santa Rosa-Sacramento routing were carrying a preponderance of through traffic (traffic not originating or terminating at Santa Rosa), and that the through traffic could not reasonably be accommodated on other existing routings between Eureka and Sacramento in the event that operations to Santa Rosa were terminated. In this circumstance we charged the marginal route serving Santa Rosa with only the difference between the direct costs of the Eureka-Santa Rosa-Sacramento operation (involving two departures and 251 miles per trip) and a non-stop Eureka-Sacramento operation (involving one departure and 206 miles per trip). However, in certain instances where the nonstop mileage under this method produced a 25% or lower load factor on the basis of the through traffic, the full direct costs of the flight as actually operated were charged to the marginal route.

After developing the revenues and costs involved in serving the eleven

marginal routes in 1969, we estimated the traffic and revenue that Air West would retain if the routes had been deleted. To accomplish this we made an assumption for each city served as to what Air West traffic would be carried by a replacement service and to what Air West connecting points. (For simplicity it was assumed that there would be no stimulation or de-stimulation of this traffic regardless of number of schedules or type of equipment offered by the replacement carrier.) We estimated Air West's participation in the remaining on-line portion of this traffic on the basis of Air West's 1968 market share in each appropriate retained on-line routing.[2/] Pricing the revenue as described above and deducting the associated traffic servicing costs yielded a net retained revenue figure for each marginal route. Adding this figure to the subsidy need of the route as operated produced the theoretical subsidy need decrease (from the carrier's standpoint) of eliminating the marginal route. These figures are shown for each route in Appendix A.

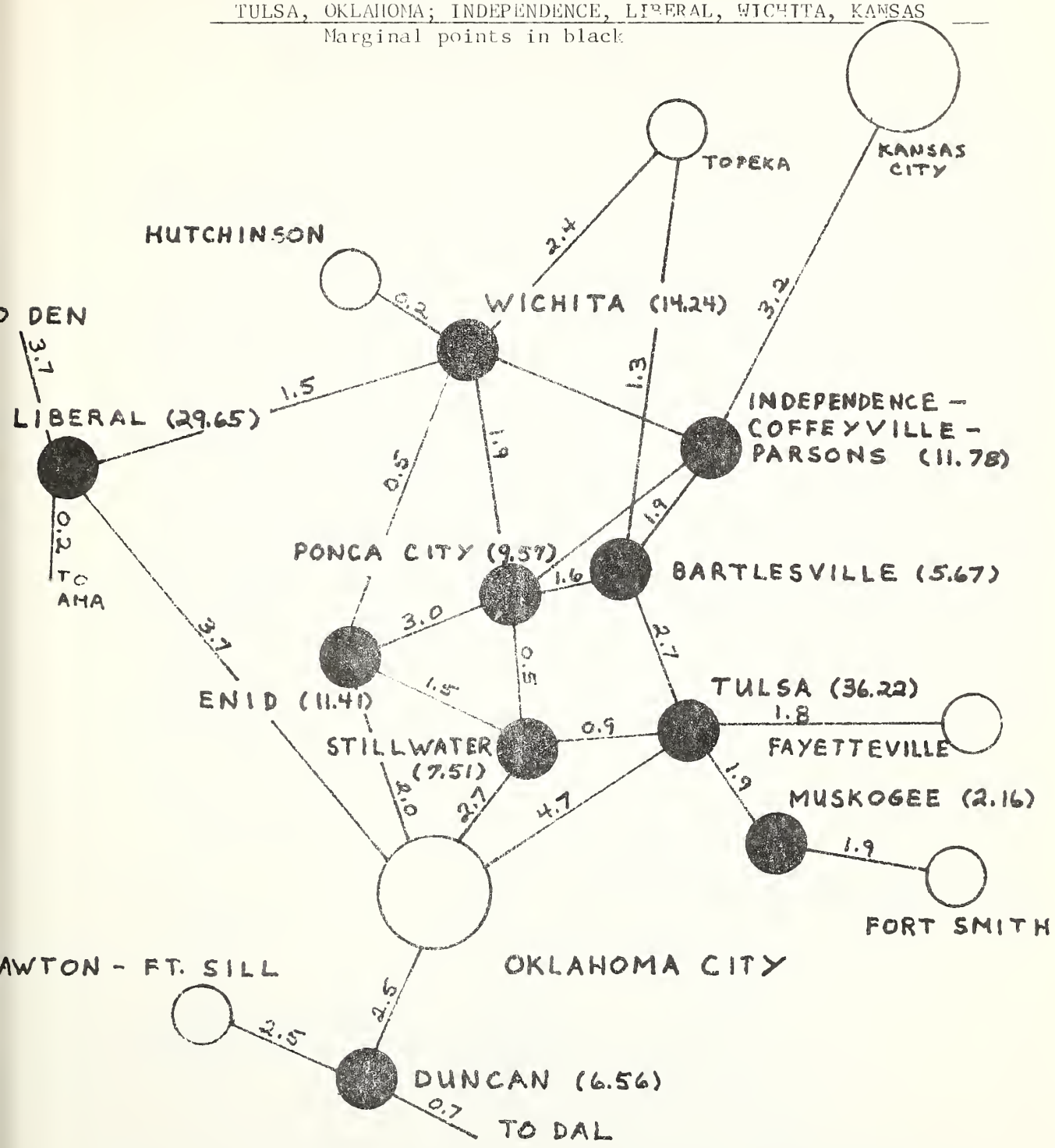
2/ These were the latest available Survey data for this purpose at the time of preparation of the report.

Not used

MARGINAL ROUTE ANALYSIS G-1

BARTLESVILLE, DUNCAN, ENID, MUSKOGEE, PONCA CITY, STILLWATER, TULSA, OKLAHOMA; INDEPENDENCE, LIBERAL, WICHITA, KANSAS

Marginal points in black



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) Number of average daily flights operated shown on each segment.

(3) Temporary suspension at Muskogee authorized in November, 1970 (Order 70-11-25) subject to provision of certain replacement service by Sedalia-Marshall-Boonville Stage Lines, Inc.

MARGINAL ROUTE ANALYSIS G-1

SERVICE TO BARTLESVILLE, DUNCAN, ENID, MUSKOGEE, PONCA CITY, STILLWATER, TULSA, OKLAHOMA; INDEPENDENCE, LIBERAL, WICHITA, KANSAS

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Bartlesville						
- Independence	48	679	1.9	8,413	23.0	12.4
- Ponca City	60	598	1.6	4,838	13.3	8.1
- Topeka	161	491	1.3	3,643	10.0	7.4
- Tulsa	40	985	2.7	12,982	35.6	13.2
Duncan						
- Dallas	129	254	.7	5,730	15.7	22.6
- Lawton	26	912	2.5	14,929	40.9	16.4
- Okla. City	67	913	2.5	14,663	40.2	16.1
Enid						
- Okla. City	68	748	2.0	12,200	33.4	16.3
- Ponca City	45	1,100	3.0	13,508	37.0	12.3
- Stillwater	42	532	1.5	7,682	21.0	14.4
- Wichita	90	190	.5	2,911	8.0	15.3
Independence						
- Kansas City	133	1,182	3.2	19,917	54.6	16.8
- Wichita	108	427	1.2	5,824	16.0	13.6

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-1 (Con't)

SERVICE TO BARTLESVILLE, DUNCAN, ENID, MUSKOGEE, PONCA CITY, STILLWATER, TULSA, OKLAHOMA; INDEPENDENCE, LIBERAL, WICHITA, KANSAS

Flight Segment Data 1/

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Liberal						
-Amarillo	132	74	.2	164	.4	2.2
-Denver	284	1,364	3.7	32,886	90.0	24.1
-Okla. City	220	1,355	3.7	30,880	84.6	22.8
-Wichita	199	562	1.5	5,614	15.4	10.0
Muskogee						
-Ft. Smith	59	684	1.9	14,925	40.9	21.8
-Tulsa	47	685	1.9	15,091	41.3	22.0
Ponca City						
-Stillwater	39	188	.5	2,000	5.5	10.6
-Wichita	66	679	1.9	7,367	20.2	10.8
Stillwater						
-Dallas	228	89	.2	1,558	4.3	17.5
-Okla. City	60	979	2.7	13,053	35.8	13.3
-Tulsa	67	331	.9	4,051	11.1	12.2
Tulsa						
-Fayetteville	98	655	1.8	10,519	28.8	16.1
-Okla. City	111	1,720	4.7	30,847	84.5	17.9
Wichita						
-Hutchinson	37	80	.2	603	1.7	7.5
-Topeka	139	870	2.4	15,208	41.7	17.5

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-1

BARTLESVILLE, DUNCAN, ENID, MUSKOGEE, PONCA CITY, STILLWATER, TULSA, OKLAHOMA; INDEPENDENCE, LIBERAL, WICHITA, KANSAS

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$2,531,000	$26.90	$ -
Aircraft operating expense	2,878,000	30.58	1.13
Servicing	1,737,000	18.46	.69
Total operating expense	4,615,000	49.04	1.82
Operating loss	2,084,000	22.14	.82
Return and tax requirement	633,000	6.73	.25
Subsidy need	$2,717,000	$28.87	$1.07

Net effect of suspension/deletion at the ten cities 1/

On-system revenue retained, net of expense	$ 252,000
Subsidy need decrease	$ 2,969,000

Statistics (1969 operations)

Aircraft departures	19,671
Revenue miles	2,122,742
O&D passengers	94,105
Revenue passenger miles	24,726,000

Additional Data

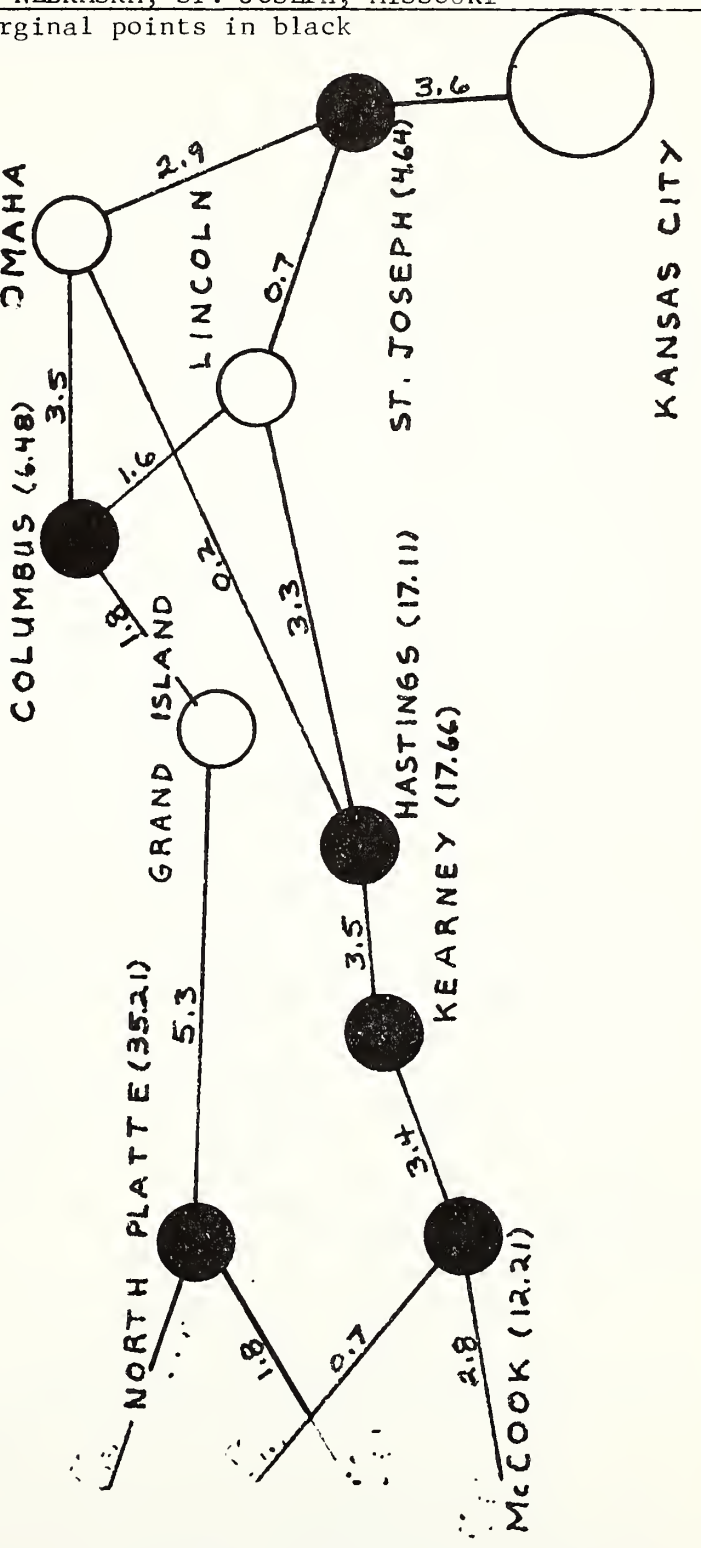
	1969 Station Expense(Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Points
Bartlesville	$ 43,000	29,000	1945	Tulsa 49 miles
Duncan	29,000	19,000	1953	Lawton 34 miles
Enid	35,000	44,000	1946	Okla.City 84 miles
Independence-Coffeyville-Parsons	39,000	38,000	1961	Joplin 78 miles
Liberal-Guyman	83,000	21,000	1956	Amarillo 124 miles
Muskogee	15,000	36,000	1944	Tulsa 56 miles
Ponca City	37,000	25,000	1938	Okla.City 96 miles
Stillwater	29,000	30,000	1953	Okla.City 56 miles
Tulsa	126,000	328,000	1938	Tulsa 6 carriers
Wichita	95,000	274,000	1938	Wichita 3 carriers

1/ Assumes replacement carrier between Wichita and Oklahoma City servicing these points plus a Denver-Liberal-Oklahoma City replacement service (no provision made for support thereof by Frontier).

MARGINAL ROUTE ANALYSIS G-2

SERVICE TO COLUMBUS, HASTINGS, KEARNEY, MCCOOK, NORTH PLATTE, NEBRASKA; ST. JOSEPH, MISSOURI

Marginal points in black



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS G-2

SERVICE TO COLUMBUS, HASTINGS, KEARNEY, MCCOOK, NORTH PLATTE, NEBRASKA; ST. JOSEPH, MISSOURI

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Columbus						
- Grand Island	61	644	1.8	13,994	38.3	21.7
- Lincoln	51	597	1.6	3,964	10.9	6.6
- Omaha	76	1,261	3.5	16,762	45.9	13.3
Hastings						
- Kearney	31	1,269	3.5	24,872	68.1	19.6
- Lincoln	91	1,195	3.3	22,358	61.3	18.7
- Omaha	143	82	.2	2,003	5.5	24.4
Kearney						
- McCook	91	1,257	3.4	26,058	71.4	20.7
McCook						
- Denver	230	1,008	2.8	20,825	57.1	20.7
- Sidney	140	260	.7	6,518	17.9	25.1
North Platte						
- Denver	240	663	1.8	15,680	43.0	23.6
- Grand Island	125	1,943	5.3	48,342	132.4	24.9
- Scottsbluff	159	1,240	3.4	32,104	88.0	25.9
St. Joseph						
- Kansas City	48	1,332	3.6	26,240	71.9	19.7
- Lincoln	123	259	.7	4,745	13.0	18.3
- Omaha	118	1,064	2.9	21,376	58.6	20.1

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-2

SERVICE TO COLUMBUS, HASTINGS, KEARNEY, MCCOOK, NORTH PLATTE, NEBRASKA; ST. JOSEPH, MISSOURI

inancial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
ommercial revenue	$2,039,000	$28.32	$ -
ircraft operating expense	1,953,000	27.12	.96
ervicing	1,300,000	18.06	.64
Total operating expense	3,253,000	45.18	1.60
Operating loss	1,214,000	16.86	.60
eturn and tax requirement	424,000	5.89	.20
Subsidy need	$1,638,000	$22.75	$ .80

et effect of suspension/deletion at the six cities 2/

n-system revenue retained, net of expense	$ 108,000
ubsidy need decrease	$1,746,000

tatistics (1969 operations)

ircraft departures 1/	13,916
evenue miles 1/	1,392,167
&D passengers	72,004
evenue passenger miles	21,712,000

dditional Data

	1969 Station Expense(Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
olumbus	$37,000	15,000	1948	Lincoln 77 miles
astings	49,000	23,000	1959	Grand Island 26 mi.
earney	47,000	19,000	1959	Grand Island 42 mi.
cCook	44,000	8,000	1959	Grand Island 146 mi.
orth Platte	78,000	19,000	1938	Grand Island 138 mi.
t. Joseph	34,000	72,000	1938	Kansas City 46 mi.

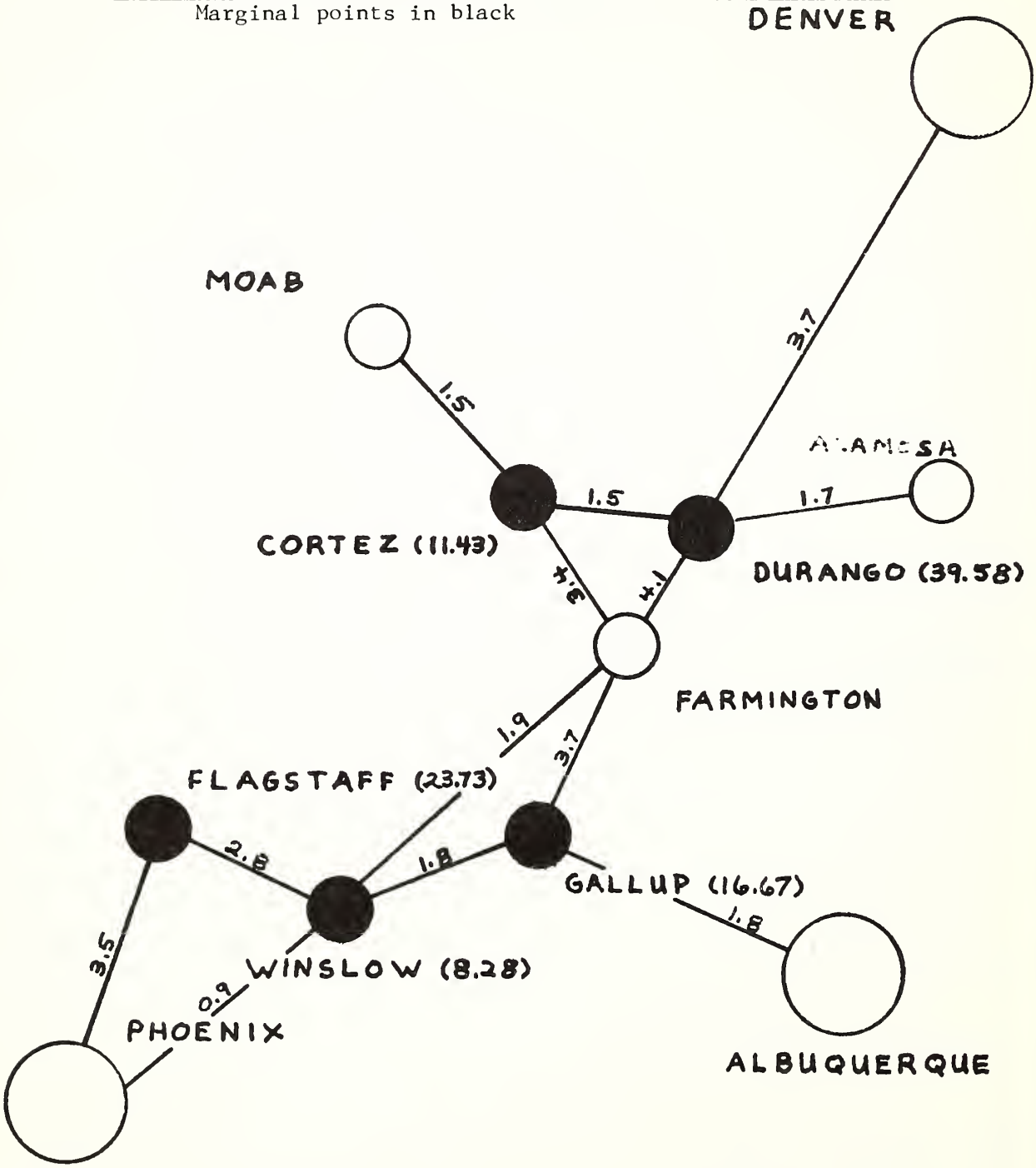
/ Excludes certain flights operated primarily to service O&D traffic at other oints.

/ Assumes that a replacement carrier would service these marginal points except St. Joseph) operating between Denver and Omaha (no provision made or support thereof by Frontier).

MARGINAL ROUTE ANALYSIS G-3

SERVICE TO CORTEZ, DURANGO, COLORADO; FLAGSTAFF, WINSLOW, ARIZONA; GALLUP, NEW MEXICO

Marginal points in black



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS G-3

SERVICE TO CORTEZ, DURANGO, COLORADO; FLAGSTAFF, WINSLOW, ARIZONA; GALLUP, NEW MEXICO

Flight Segment Data 1/

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Cortez						
- Durango	51	564	1.5	10,067	27.6	17.8
- Farmington	45	1,249	3.4	15,621	42.8	12.5
- Moab	93	564	1.5	7,101	19.5	12.6
Durango						
- Alamosa	105	626	1.7	11,568	31.7	18.5
- Denver	238	1,363	3.7	41,871	114.7	30.7
- Farmington	39	1,481	4.1	26,406	72.3	17.8
Flagstaff						
- Phoenix	119	1,271	3.5	27,454	75.2	21.6
- Winslow	56	1,032	2.8	19,433	53.2	18.8
Gallup						
- Albuquerque	126	642	1.8	14,220	39.0	22.2
- Farmington	91	1,358	3.7	22,889	62.7	16.9
- Winslow	114	661	1.8	10,100	27.7	15.3
Winslow						
- Farmington	183	693	1.9	12,807	35.1	18.5
- Phoenix	133	21	0.9	346	0.9	16.5

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-3

SERVICE TO CORTEZ, DURANGO, COLORADO; FLAGSTAFF, WINSLOW, ARIZONA; GALLUP, NEW MEXICO

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$1,881,000	$26.57	$ -
Aircraft operating expense	1,356,000	19.15	.72
Servicing	1,073,000	15.16	.57
Total operating expense	2,429,000	34.31	1.29
Operating loss	548,000	7.74	.29
Return and tax requirement	287,000	4.06	.15
Subsidy need	$ 835,000	$11.80	$ .44

Net effect of suspension/deletion at the five cities 2/

On-system revenue retained, net of expense	$ 830,000
Subsidy need decrease	$1,665,000

Statistics (1969 operations)

Aircraft departures 1/	10,658
Revenue miles 1/	899,013
O&D passengers	70,789
Revenue passenger miles	19,556,000

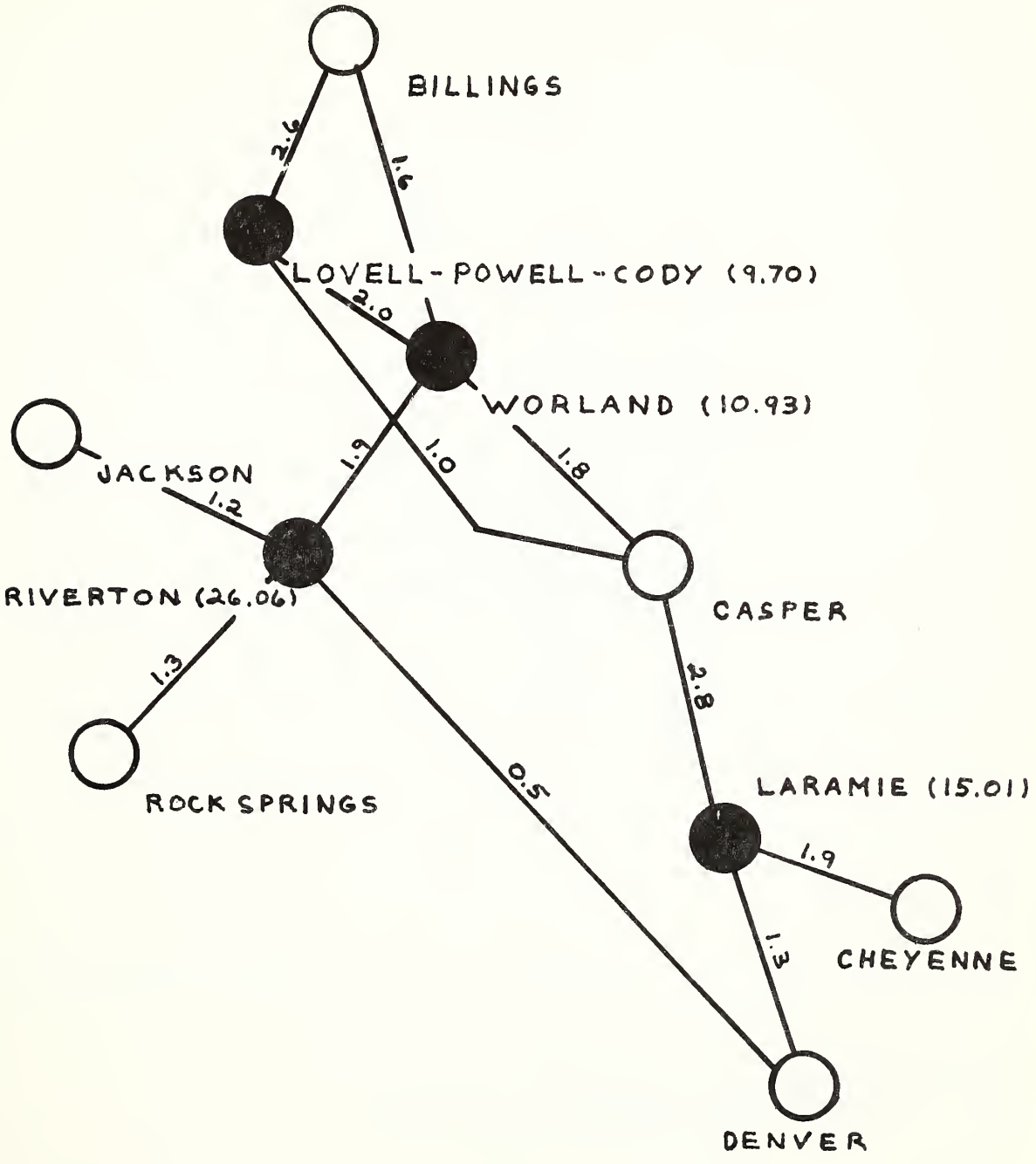
Additional Data

	1969 Station Expense(Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Cortez	$40,000	6,000	1946	Farmington 72 miles
Durango	77,000	10,000	1946	Farmington 50 miles
Flagstaff	60,000	26,000	1948	Grand Canyon 65 miles
Gallup	41,000	14,000	1946	Farmington 122 miles
Winslow	38,000	8,000	1938	Grand Canyon 100 miles

1/ Excludes certain flights operated primarily to service O&D traffic at other points.
2/ Assumes replacement service to Flagstaff, Winslow, and Gallup between Phoenix and Albuquerque and Cortez/Durango-Farmington (no provision made for subsidization thereof by Frontier).

MARGINAL ROUTE ANALYSIS G-4

SERVICE TO CODY, LARAMIE, RIVERTON, WORLAND, WYOMING
Marginal points in black



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS G-4

SERVICE TO CODY, LARAMIE, RIVERTON, WORLAND, WYOMING

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Cody						
-Billings	92	947	2.6	11,185	30.6	11.8
-Casper	170	361	1.0	6,847	18.8	19.0
-Worland	65	741	2.0	9,785	26.8	13.2
Laramie						
-Casper	118	1,030	2.8	28,059	76.9	27.3
-Cheyenne	45	699	1.9	20,933	57.4	30.0
-Denver	115	484	1.3	15,652	42.9	32.3
Riverton						
-Casper	101	1,478	4.0	23,079	63.2	15.6
-Denver	293	183	0.5	3,140	8.6	17.2
-Jackson	121	447	1.2	5,992	16.4	13.4
-Rock Springs	105	480	1.3	8,267	22.6	17.2
-Worland	69	700	1.9	10,116	27.7	14.5
Worland						
-Billings	130	568	1.6	5,969	16.4	10.5
-Casper	105	647	1.8	11,524	31.6	17.8

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-4

SERVICE TO CODY, LARAMIE, RIVERTON, WORLAND, WYOMING

nancial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
mmercial revenue	$1,237,000	$29.46	$ -
rcraft operating expense	1,308,000	31.15	1.06
rvicing	760,000	18.10	.61
Total operating expense	2,068,000	49.25	1.67
Operating loss	831,000	19.79	.67
turn and tax requirement	286,000	6.81	.23
Subsidy need	$1,117,000	$26.60	$ .90

t effect of suspension/deletion at the four cities 1/

-system revenue retained, net of expense	$ 217,000
bsidy need decrease	$1,333,000

atistics (1969 operations)

rcraft departures	9,035
venue miles	950,914
D passengers	41,992
venue passenger miles	11,337,000

ditional Data

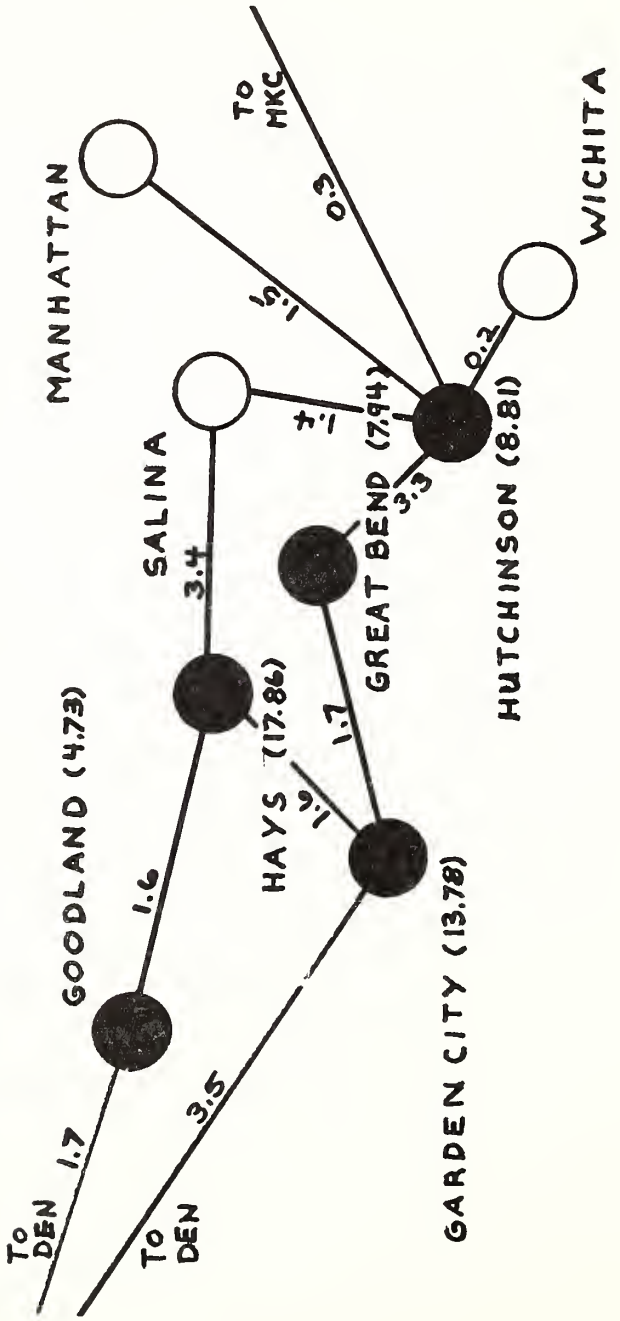
	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point	
dy-Lovell-Powell	$40,000	12,000	1946	Billings	105 miles
ramie	49,000	23,000	1946	Cheyenne	49 miles
verton-Lander	84,000	15,000	1946	Casper	144 miles
rland	37,000	5,000	1946	Sheridan	127 miles

1/ Assumes that a replacement carrier would operate Billings-Cody-Worland-Riverton-Casper (no provision made for support thereof by Frontier).

MARGINAL ROUTE ANALYSIS G-5

SERVICE TO GARDEN CITY, GOODLAND, GREAT BEND, HAYS, HUTCHINSON, KANSAS

Marginal points in black



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) Number of average daily flights operated shown on each segment.

(3) Temporary suspension at Great Bend and Hutchinson authorized in August, 1970 (Order 70-8-31) subject to provision of certain replacement service.

MARGINAL ROUTE ANALYSIS G-5

SERVICE TO GARDEN CITY, GOODLAND, GREAT BEND, HAYS, HUTCHINSON, KANSAS

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Garden City						
- Denver	253	1,268	3.5	21,822	59.8	17.2
- Great Bend	106	614	1.7	10,235	28.0	16.7
- Hays	102	595	1.6	9,871	27.0	16.6
Goodland						
- Denver	172	610	1.7	17,751	48.6	29.1
- Hays	136	585	1.6	15,614	42.8	26.7
Great Bend						
- Hutchinson	58	1,204	3.3	11,330	31.0	9.4
Hays						
-Salina	92	1,248	3.4	26,220	71.8	21.0
Hutchinson						
- Kansas City	192	108	0.3	1,292	3.5	12.0
- Manhattan	99	561	1.5	9,245	25.3	16.5
- Salina	55	523	1.4	2,840	7.8	5.4
- Wichita	37	80	0.2	603	1.7	7.5

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-5

SERVICE TO GARDEN CITY, GOODLAND, GREAT BEND, HAYS, HUTCHINSON, KANSAS

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$1,147,000	$29.41	$ -
Aircraft operating expense	1,009,000	25.87	.88
Servicing	679,000	17.41	.59
Total operating expense	1,688,000	43.28	1.47
Operating loss	541,000	13.87	.47
Return and tax requirement	222,000	5.70	.20
Subsidy need	$ 763,000	$19.57	$ .67

Net effect of suspension/deletion at the five cities 2/

On-system revenue retained, net of expense	$ 42,000
Subsidy need decrease	$805,000

Statistics (1969 operations)

Aircraft departures 1/	6,999
Revenue miles 1/	745,546
O&D passengers	38,998
Revenue passenger miles	12,544,000

Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Garden City	$32,000	15,000	1939	Wichita 206 miles
Goodland	26,000	5,000	1961	Denver 180 miles
Great Bend	32,000	16,000	1951	Wichita 117 miles
Hays	41,000	15,000	1961	Salina 98 miles
Hutchinson	42,000	36,000	1939	Wichita 54 miles

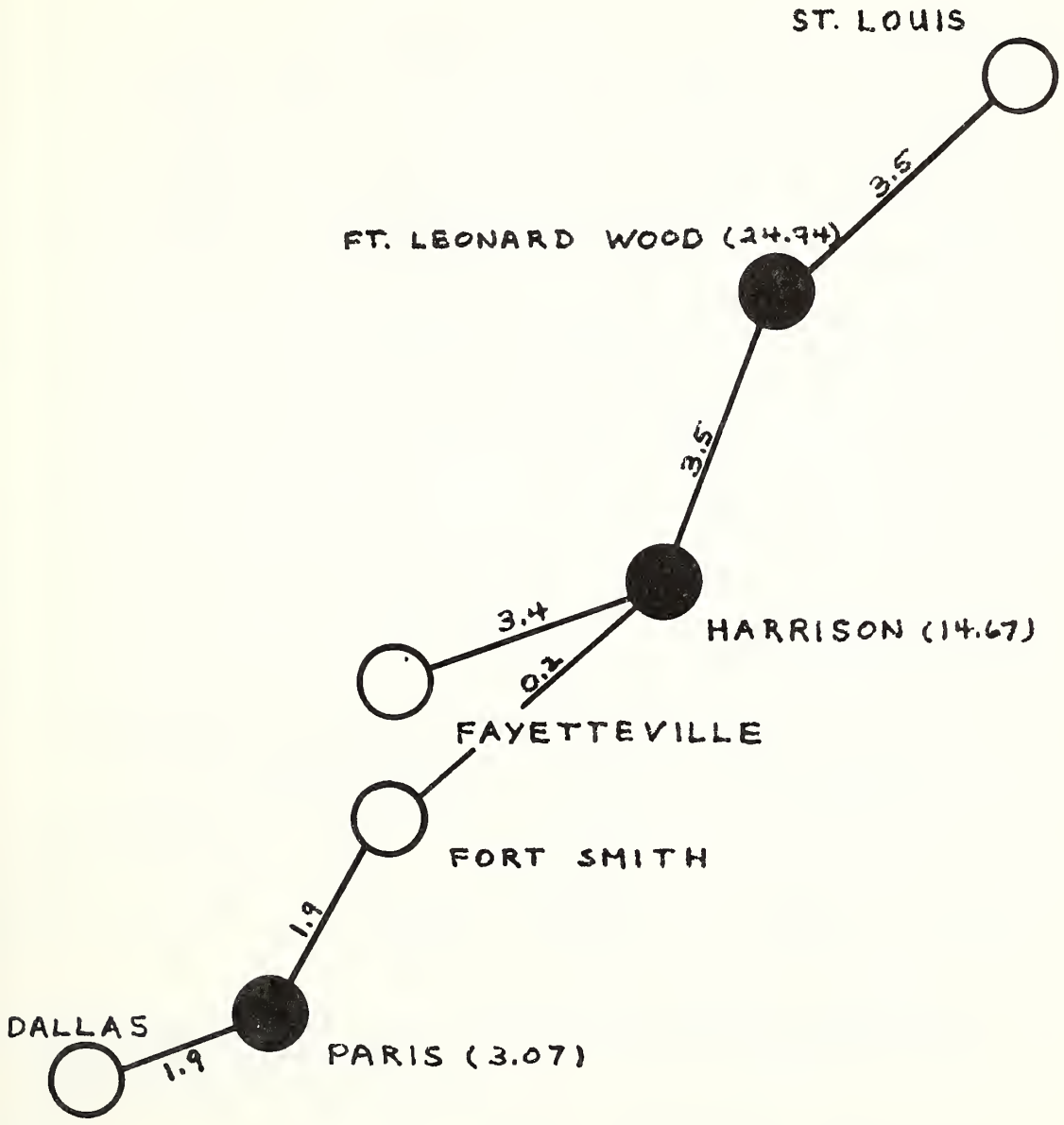
1/ Excludes certain flights operated primarily to service O&D traffic at other points.

2/ Assumes that Air Midwest would service the traffic at these five marginal points on its Denver-Wichita/Kansas City flights.

MARGINAL ROUTE ANALYSIS G-6

SERVICE TO FORT LEONARD WOOD, MISSOURI; HARRISON, ARKANSAS; PARIS, TEXAS

Marginal points in black



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) Number of average daily flights operated shown on each segment.

(3) Temporary suspension at Paris authorized in November, 1970 (Order 70-11-25) subject to provision of certain replacement service by Sedalia-Marshall-Boonville Stage Lines, Inc.

MARGINAL ROUTE ANALYSIS G-6

SERVICE TO FT. LEONARD WOOD, MISSOURI; HARRISON, ARKANSAS; PARIS, TEXAS

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Ft. Leonard Wood						
- Harrison	116	1,295	3.5	28,127	77.1	21.7
- St. Louis	119	1,325	3.5	40,412	110.7	30.5
Harrison						
- Fayetteville	60	1,250	3.4	26,688	73.1	21.4
- Ft. Smith	95	62	0.2	525	1.4	8.5
Paris						
- Dallas	98	689	1.9	17,576	48.2	25.5
- Ft. Smith	132	687	1.9	16,254	44.5	23.7

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-6

SERVICE TO FORT.LEONARD WOOD, MISSOURI; HARRISON, ARKANSAS; PARIS TEXAS

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 949,000	$23.88	$ -
Aircraft operating expense	761,000	19.15	.80
Servicing	549,000	13.82	.58
Total operating expense	1,310,000	32.97	1.38
Operating loss	361,000	9.08	.38
Return and tax requirement	166,000	4.18	.17
Subsidy need	$ 527,000	$13.26	$ .56

Net effect of suspension/deletion at the three cities 1/

On-system revenue retained, net of expense	$134,000
Subsidy need decrease	$661,000

Statistics (1969 operations)

Aircraft departures	5,324
Revenue miles	549,111
O&D passengers	39,737
Revenue passenger miles	9,443,000

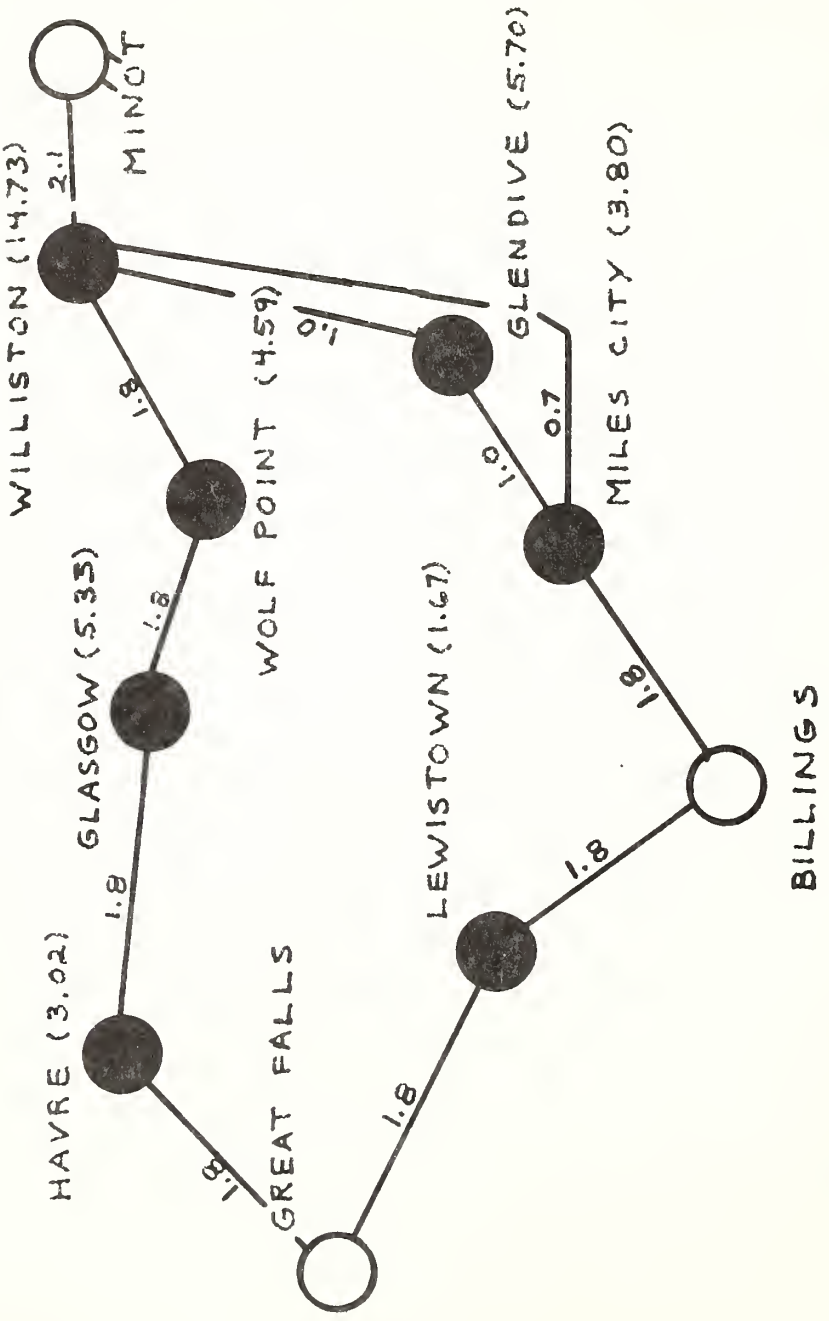
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Fort Leonard Wood	$81,000	13,000 2/	1961	Springfield, Mo. 90 miles
Harrison	39,000	7,000	1955	Fayetteville, 76 mi.
Paris	25,000	23,000	1946	Dallas 94 miles

1/ Assumes replacement service St. Louis-Ft. Leonard Wood-Harrison-Fort Smith; and Paris-Dallas.
2/ 1970 census data for Rolla, Mo.

MARGINAL ROUTE ANALYSIS G-7

SERVICE TO GLASGOW, GLENDIVE, HAVRE, LEWISTOWN,
MILES CITY, WOLF POINT, MONTANA; WILLISTON, NORTH DAKOTA



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) Number of average daily flights operated shown on each segment.
(3) Sidney, Montana not served by Frontier during 1969 due to airport construction (Order 68-7-3).

MARGINAL ROUTE ANALYSIS G-7

SERVICE TO GLASGOW, GLENDIVE, HAVRE, LEWISTOWN, MILES CITY, MONTANA; WILLISTON, NORTH DAKOTA

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Glasgow						
- Havre	147	646	1.8	7,041	19.3	10.9
- Wolf Point	48	641	1.8	6,192	17.0	9.7
Glendive						
- Miles City	75	375	1.0	4,650	12.7	12.4
- Williston	87	380	1.0	3,530	9.7	9.3
Havre						
- Great Falls	104	667	1.8	8,017	22.0	12.0
Lewistown						
- Billings	97	658	1.8	6,172	16.9	9.4
- Great Falls	94	654	1.8	6,475	17.7	9.9
Miles City						
- Billings	135	657	1.8	9,053	24.8	13.8
- Williston	160	265	0.7	4,126	11.3	15.6
Williston						
- Minot	109	766	2.1	10,065	27.6	13.1
- Wolf Point	90	664	1.8	5,910	16.2	8.9

1/ Excluding iregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-7

SERVICE TO GLASGOW, GLENDIVE, HAVRE, LEWISTOWN, MILES CITY, WOLF POINT, MONTANA; WILLISTON, NORTH DAKOTA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 804,000	$34.17	$ -
Aircraft operating expense	935,000	39.74	1.16
Servicing	534,000	22.70	.67
Total operating expense	1,469,000	62.44	1.83
Operating loss	665,000	28.27	.83
Return and tax requirement	204,000	8.67	.25
Subsidy need	$ 869,000	$36.94	$1.08

Net effect of suspension/deletion at the seven cities 1/

On-system revenue retained, net of expense	$ 138,000
Subsidy need decrease	$1,007,000

Statistics (1969 operations)

Aircraft departures	6,479
Revenue miles	678,868
O&D passengers	23,526
Revenue passenger miles	9,395,000

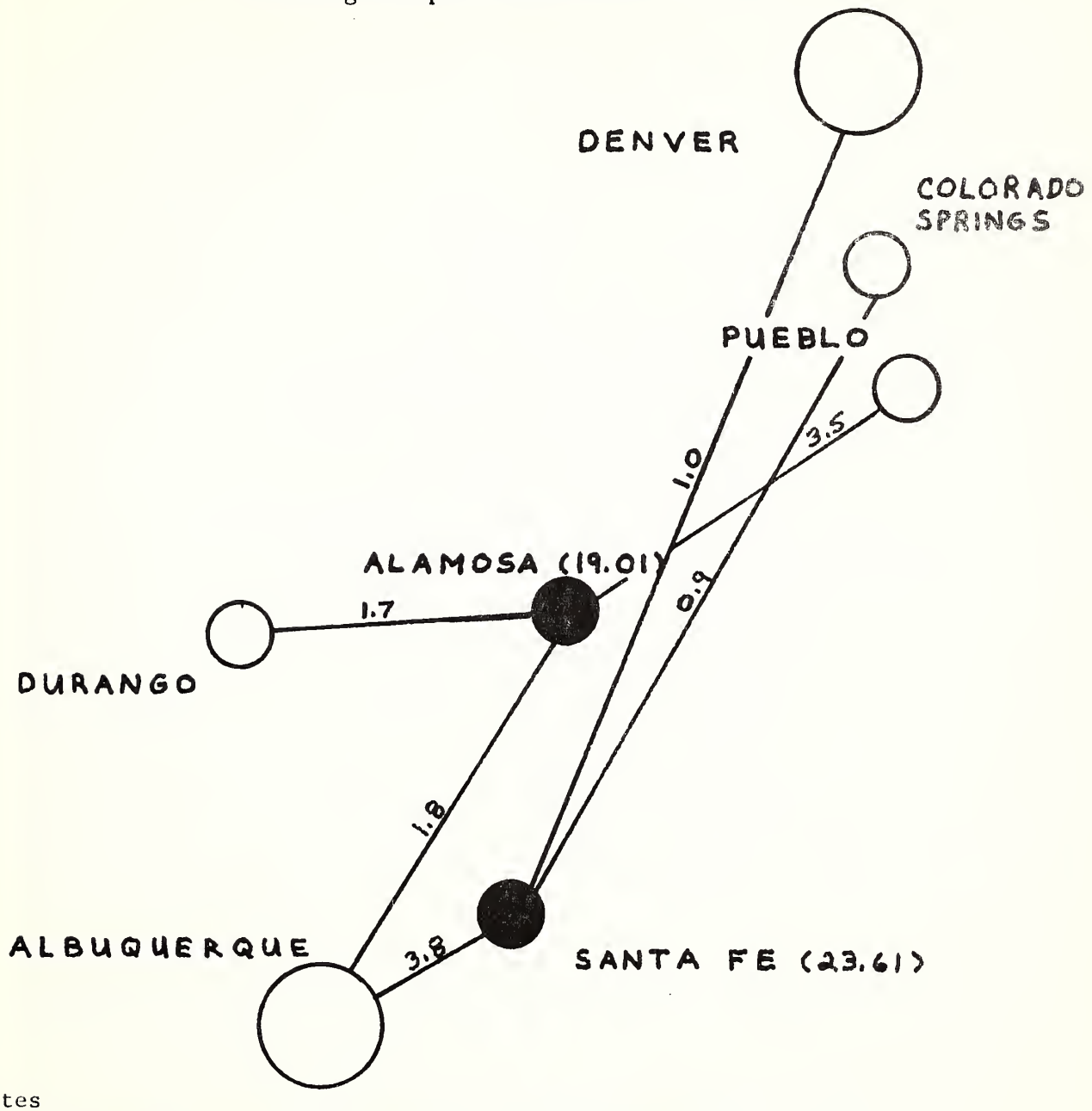
Additional Data

	1969 Station Expense(Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Glasgow	$30,000	5,000	1959	Great Falls 274 miles
Glendive	13,000	6,000	1954	Bismark 209 miles
Havre	20,000	10,000	1959	Great Falls 113 miles
Lewistown	24,000	6,000	1938	Great Falls 108 miles
Miles City	25,000	9,000	1938	Billings 152 miles
Wolf Point	17,000	3,000	1954	Minot 222 miles
Williston	39,000	11,000	1954	Minot 119 miles

1/ Assumes that a replacement carrier would service these points on Great Falls/Billings-Minot routings (no provision made for support thereof by Frontier).

MARGINAL ROUTE ANALYSIS G-8

ALAMOSA, COLORADO; SANTA FE, NEW MEXICO
Marginal points in black



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS G-8

SERVICE TO ALAMOSA, COLORADO; SANTA FE, NEW MEXICO

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Alamosa						
- Albuquerque	170	649	1.8	6,055	16.6	9.3
- Durango	105	626	1.7	11,568	31.7	18.5
- Pueblo	96	1,275	3.5	25,016	68.5	19.6
Santa Fe						
- Albuquerque	50	1,380	3.8	20,852	57.1	15.1
- Colo. Springs	235	344	.9	7,344	20.1	21.3
- Denver	295	348	1.0	8,818	24.2	25.3

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-8

ALAMOSA, COLORADO; SANTA FE, NEW MEXICO

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 803,000	$26.80	$ -
Aircraft operating expense	569,000	18.99	.71
Servicing	432,000	14.42	.54
Total operating expense	1,001,000	33.41	1.25
Operating loss	198,000	6.61	.25
Return and tax requirement	123,000	4.11	.15
Subsidy need	$ 321,000	$10.72	$ .40

Net effect of suspension/deletion at the two cities 2/

On-system revenue retained, net of expense	$106,000
Subsidy need decrease	$427,000

Statistics (1969 operations)

Aircraft departures 1/	4,107
Revenue miles 1/	401,763
O&D passengers	29,958
Revenue passenger miles	7,451,000

Additional Data

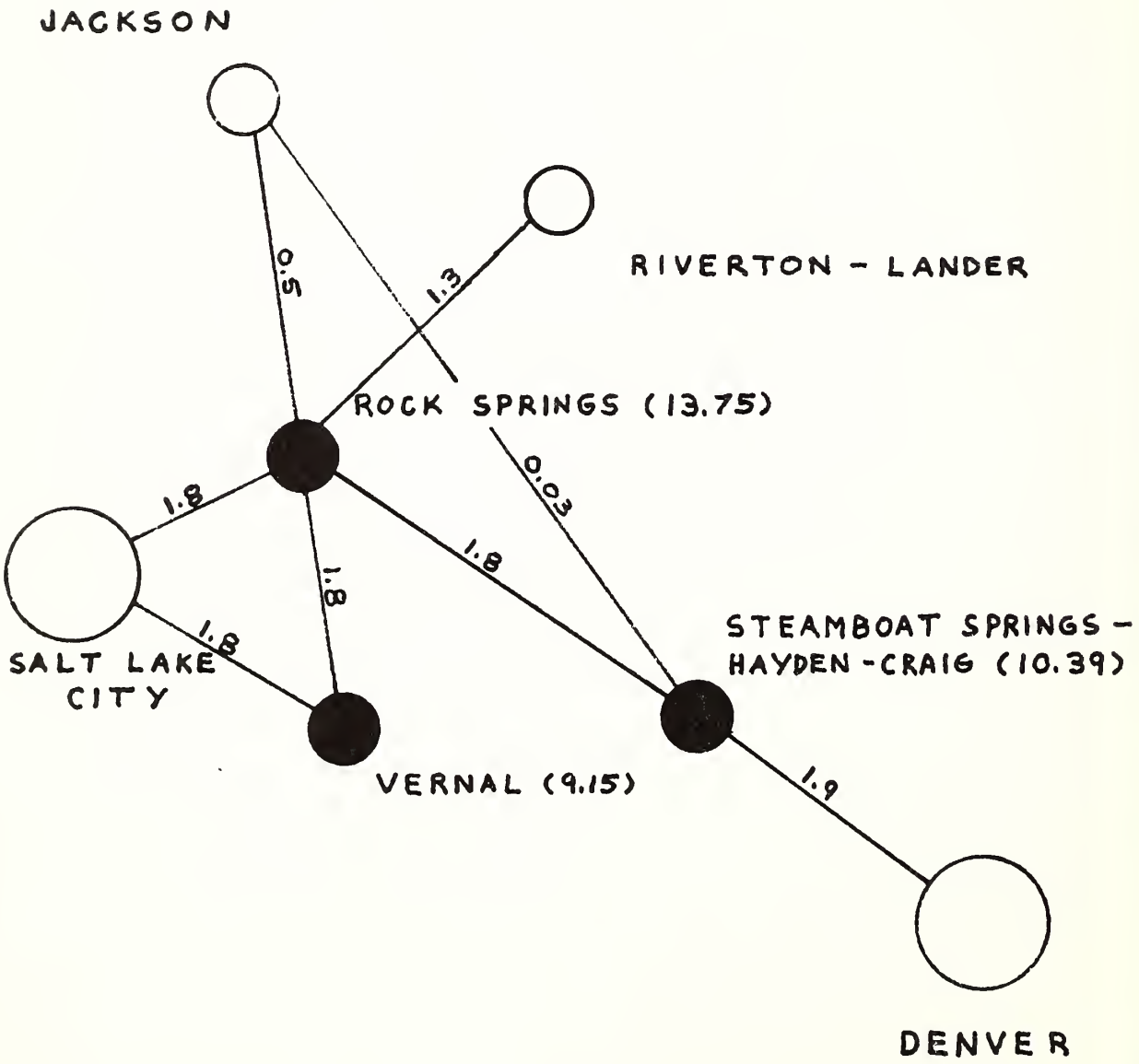
	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Alamosa	$45,000	7,000	1950	Pueblo 120 miles
Santa Fe	66,000	39,000	1938	Santa Fe, TXI

1/ Excludes certain flights operated primarily to service O&D traffic at other points.
2/ Assumes a replacement carrier would service these points operating between Denver and Albuquerque.

MARGINAL ROUTE ANALYSIS G-9

SERVICE TO HAYDEN, COLORADO; VERNAL, UTAH;
ROCK SPRINGS, WYOMING

Marginal points in black



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS G-9

SERVICE TO HAYDEN, COLORADO; ROCK SPRINGS, WYOMING; VERNAL, UTAH

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Hayden						
- Denver	134	686	1.9	15,037	41.2	21.9
- Jackson	287	11	-	151	.4	13.7
- Rock Springs	123	642	1.8	9,251	25.3	14.4
Rock Springs						
- Jackson	162	167	.5	4,808	13.2	28.8
- Riverton	105	480	1.3	8,266	22.6	17.2
- Salt Lake City	161	648	1.8	12,293	33.7	19.0
- Vernal	84	654	1.8	6,828	18.7	10.4
Vernal						
- Salt Lake City	130	674	1.8	6,902	18.9	10.2

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-9

SERVICE TO HAYDEN, COLORADO; VERNAL, UTAH
ROCK SPRINGS, WYOMING

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 622,000	$25.09	$ -
Aircraft operating expense	660,000	26.62	1.06
Servicing	385,000	15.53	.62
Total operating expense	1,045,000	42.15	1.68
Operating loss	423,000	17.06	.68
Return and tax requirement	148,000	5.97	.24
Subsidy need	$ 571,000	$ 23.03	$ .92

Net effect of suspension/deletion at the three cities 1/

On-system revenue retained, net of expense	$ 27,000
Subsidy need decrease	$598,000

Statistics (1969 operations)

Aircraft departures	4,044
Revenue miles	514,625
O&D passengers	24,789
Revenue passenger miles	6,328,000

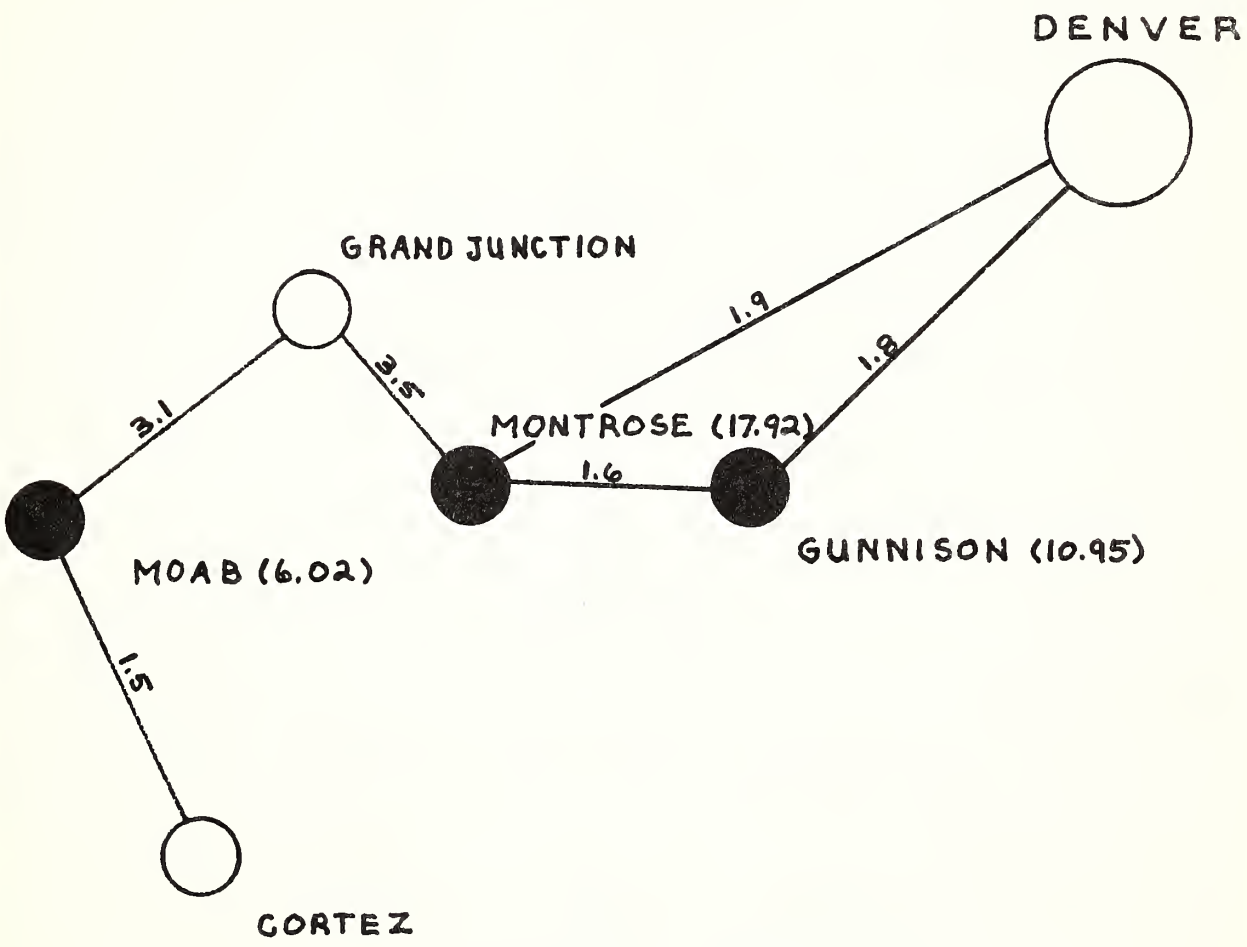
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Steamboat Springs-Hayden-Craig	$29,000	7,000 2/	1964	Grand Junction 153 mi.
Rock Springs	$33,000	11,000	1938	Salt Lake City 186 mi.
Vernal	$38,000	4,000	1949	Grand Junction 119 mi.

1/ Assumes that a replacement carrier would service these points on routings between Denver, Salt Lake City and Casper (no provision made for support thereof by Frontier).
2/ Hayden estimated.

MARGINAL ROUTE ANALYSIS G-10

SERVICE TO GUNNISON, MONTROSE, COLORADO; MOAB, UTAH
Marginal points in black



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS G-10

SERVICE TO GUNNISON, MONTROSE, COLORADO; MOAB, UTAH

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Gunnison						
- Denver	134	656	1.8	22,475	62.3	34.3
- Montrose	56	586	1.6	12,728	34.9	21.7
Montrose						
- Denver	183	651	1.9	14,491	39.7	22.3
- Grand Junction	54	1,279	3.5	24,109	66.1	18.8
Moab						
- Cortez	93	564	1.5	7,101	19.5	12.6
- Grand Junction	71	1,146	3.1	9,818	26.9	8.9

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-10

SERVICE TO GUNNISON, MONTROSE, COLORADO; MOAB, UTAH

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$553,000	$21.31	$ -
Aircraft operating expense	521,000	20.08	.94
Servicing	382,000	14.72	.69
Total operating expense	903,000	34.80	1.63
Operating loss	350,000	13.49	.63
Return and tax requirement	108,000	4.16	.20
Subsidy need	$458,000	$17.65	$ .83

Net effect of suspension/deletion at the three cities 2/

On-system revenue retained, net of expense	$ 71,000
Subsidy need decrease	$529,000

Statistics (1969 operations)

Aircraft departures 1/	4,380
Revenue miles 1/	326,418
O&D passengers	25,947
Revenue passenger miles	5,545,000

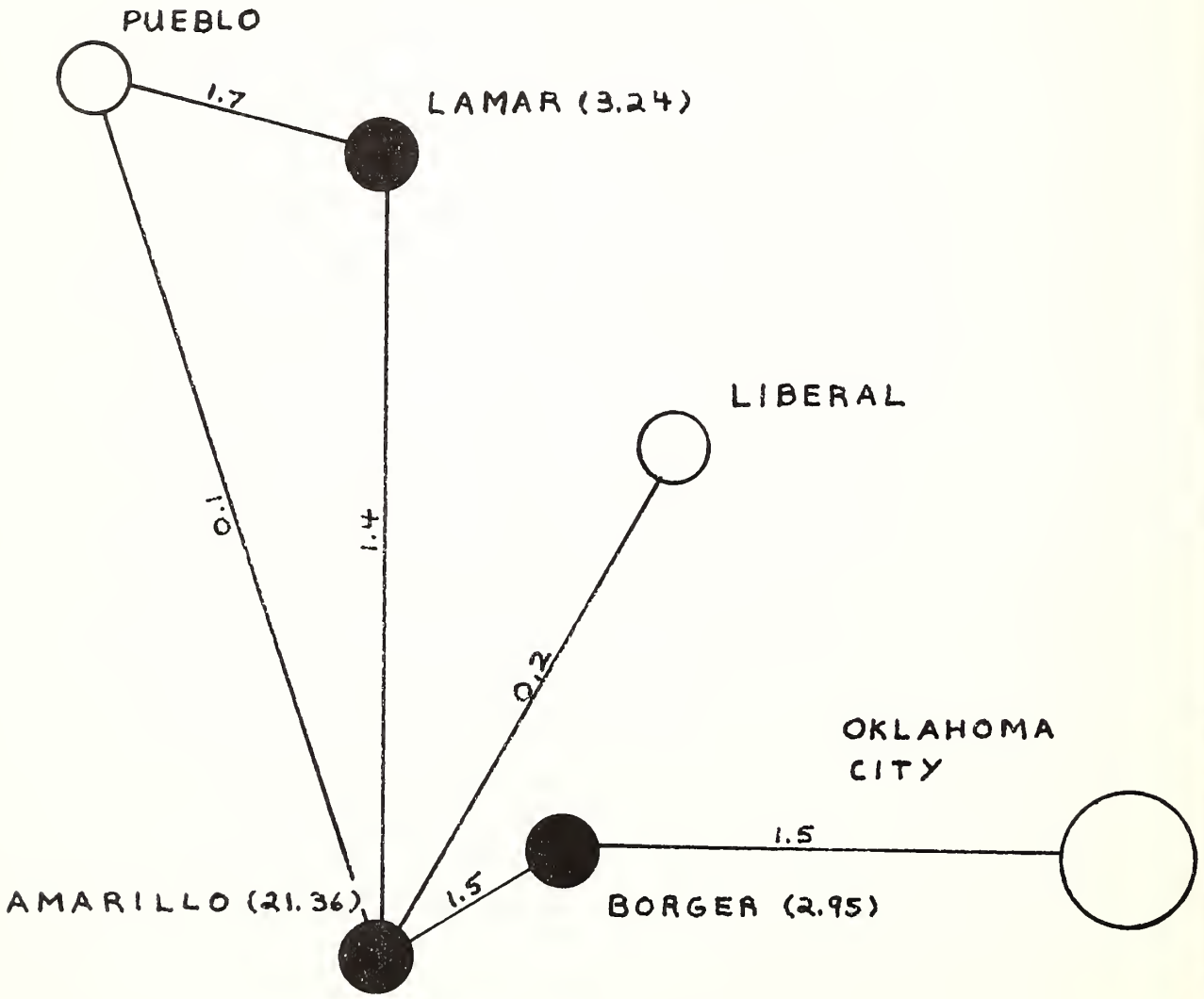
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Gunnison	$26,000	5,000	1946	Grand Junction 130 mi.
Montrose-Delta	45,000	10,000	1946	Grand Junction 52 mi.
Moab	24,000	5,000	1959	Grand Junction 111 mi.

1/ Excludes certain flights operated primarily to service O&D traffic at other points.
2/ Assumes that a replacement carrier would service these points on a Denver-Grand Junction routing (no provision made for support thereof by Frontier).

MARGINAL ROUTE ANALYSIS G-11

SERVICE TO AMARILLO, BORGER, TEXAS; LAMAR, COLORADO
Marginal points in black



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) Number of average daily flights operated shown on each segment.
(3) Temporary exemption to serve Borger through Amarillo granted in May, 1970 (Order 70-5-121).

MARGINAL ROUTE ANALYSIS G-11

SERVICE TO AMARILLO, BORGER, TEXAS; LAMAR, COLORADO

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Amarillo						
- Borger	36	537	1.5	9,725	26.6	18.1
- Lamar	203	512	1.4	7,864	21.5	15.4
- Pueblo	263	40	0.1	604	1.7	15.1
Borger						
- Okla. City	214	542	1.5	11,669	32.0	21.5
Lamar						
- Pueblo	100	603	1.7	9,123	25.0	15.1

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-11

SERVICE TO AMARILLO, BORGER, TEXAS; LAMAR, COLORADO

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$518,000	$27.72	$ -
Aircraft operating expense	398,000	21.30	.77
Servicing	276,000	14.77	.53
Total operating expense	674,000	36.07	1.30
Operating loss	156,000	8.35	.30
Return and tax requirement	90,000	4.82	.17
Subsidy need	$246,000	$13.17	$ .47

Net effect of suspension/deletion at the three cities 1/

On-system revenue retained, net of expense	$ 32,000
Subsidy need decrease	$278,000

Statistics (1969 operations)

Aircraft departures	2,285
Revenue miles	320,867
O&D passengers	18,684
Revenue passenger miles	6,466,000

Additional Data

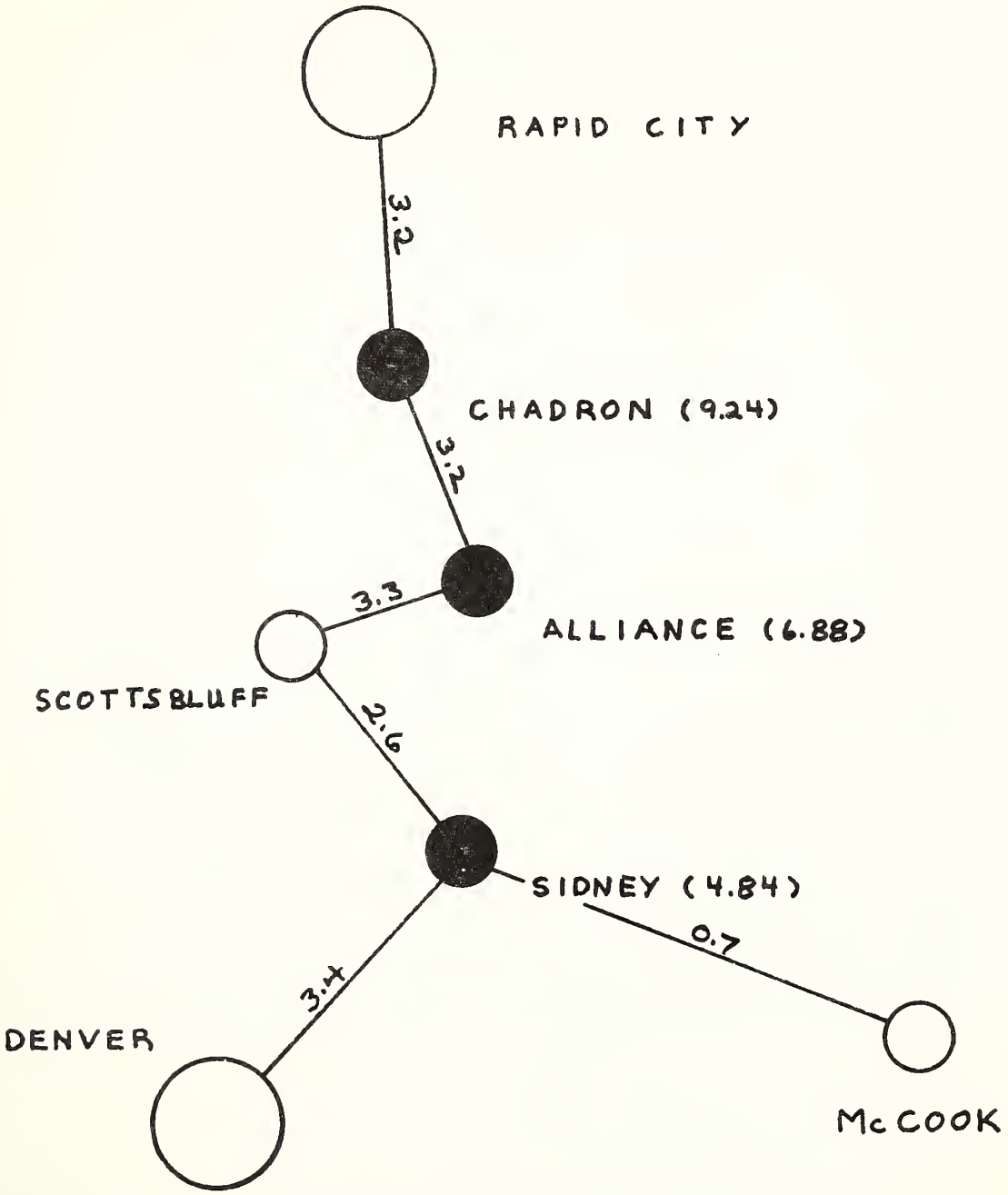
	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Amarillo	$66,000	124,000	1938	Amarillo, BN,CO,TXI, TW
Borger	15,000	14,000	1951	Amarillo 50 miles
Lamar	16,000	8,000	1956	Pueblo 91 miles

1/ Assumes that a replacement carrier would service these points operating between Denver and Oklahoma City (no provision made for support thereof by Frontier).

MARGINAL ROUTE ANALYSIS G-12

SERVICE TO ALLIANCE, CHADRON, SIDNEY, NEBRASKA

Marginal points in black



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS G-12

SERVICE TO ALLIANCE, CHADRON, SIDNEY, NEBRASKA

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Alliance						
- Chadron	55	1,170	3.2	12,285	33.7	10.5
- Scottsbluff	43	1,217	3.3	17,257	48.0	14.2
Chadron						
- Rapid City	83	1,157	3.2	6,410	17.6	5.5
Sidney						
- Denver	136	1,243	3.4	22,562	61.8	18.2
- McCook	140	260	.7	6,518	17.9	25.1
- Scottsbluff	63	961	2.6	13,966	38.3	14.5

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-12

SERVICE TO ALLIANCE, CHADRON, SIDNEY, NEBRASKA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 427,000	$27.10	$ -
Aircraft operating expense	767,000	48.67	1.80
Servicing	399,000	25.32	.93
Total operating expense	1,166,000	73.99	2.73
Operating loss	739,000	46.89	1.73
Return and tax requirement	162,000	10.28	.38
Subsidy need	$ 901,000	$57.17	$2.11

Net effect of suspension/deletion at the three cities 1/

On-system revenue retained, net of expense	$ 44,000
Subsidy need decrease	$945,000

Statistics (1969 operations)

Aircraft departures	6,172
Revenue miles	498,841
O&D passengers	15,759
Revenue passenger miles	4,725,000

Additional Data

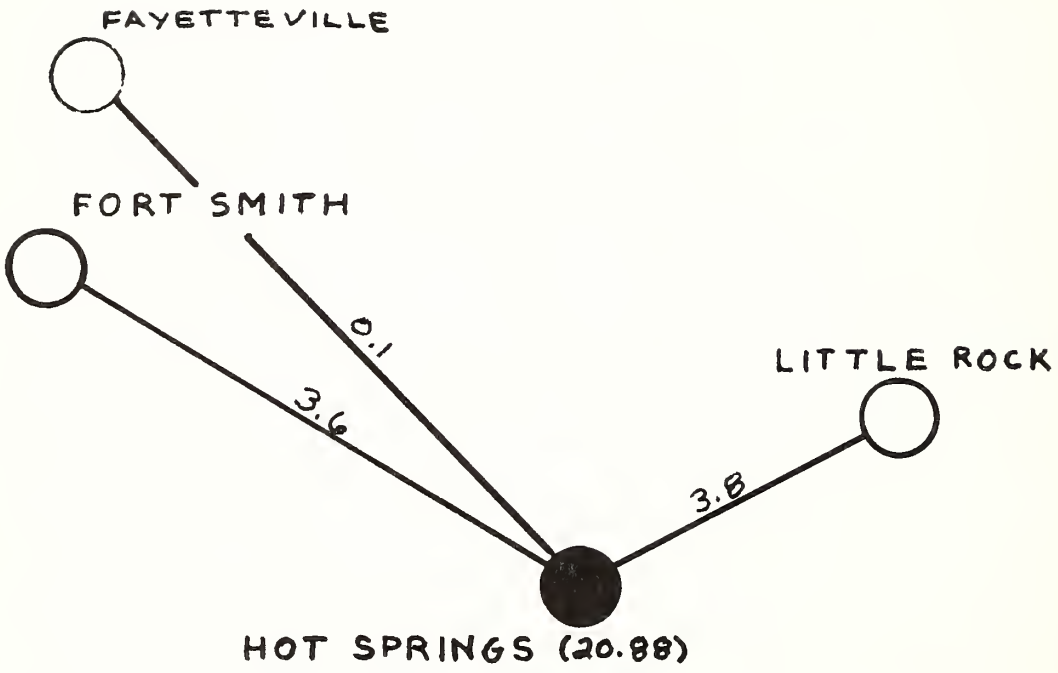
	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Alliance	40,000	7,000	1946	Scottsbluff 59 miles
Chadron	34,000	5,000	1946	Scottsbluff 99 miles
Sidney	35,000	6,000	1959	Scottsbluff 74 miles

1/ Assumes that a replacement carrier would operate Denver-Sidney-Alliance-Chadron (no provision made for support thereof by Frontier).

MARGINAL ROUTE ANALYSIS G-13

SERVICE TO HOT SPRINGS, ARKANSAS

Marginal points in black



Notes

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS G-13

SERVICE TO HOT SPRINGS, ARKANSAS

ight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
t Springs						
- Fayetteville	122	53	.1	706	1.9	13.3
- Fort Smith	95	1,310	3.6	26,724	73.2	20.4
- Little Rock	51	1,375	3.8	22,715	62.2	16.5

Excluding irregular operations.
urce: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-13

SERVICE TO HOT SPRINGS, ARKANSAS

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$388,000	$22.91	$ -
Aircraft operating expense	214,000	12.63	.55
Servicing	212,000	12.52	.55
Total operating expense	426,000	25.15	1.10
Operating loss	38,000	2,24	.10
Return and tax requirement	43,000	2.54	.11
Subsidy need	$ 81,000	$ 4.78	$ .21

Net effect of suspension/deletion at the city

On-system revenue retained, net of expense	$ 93,000
Subsidy need decrease	$194,000

Statistics (1969 operations)

Aircraft departures 1/	2,076
Revenue miles 1/	114,964
O&D passengers	16,937
Revenue passenger miles	4,533,000

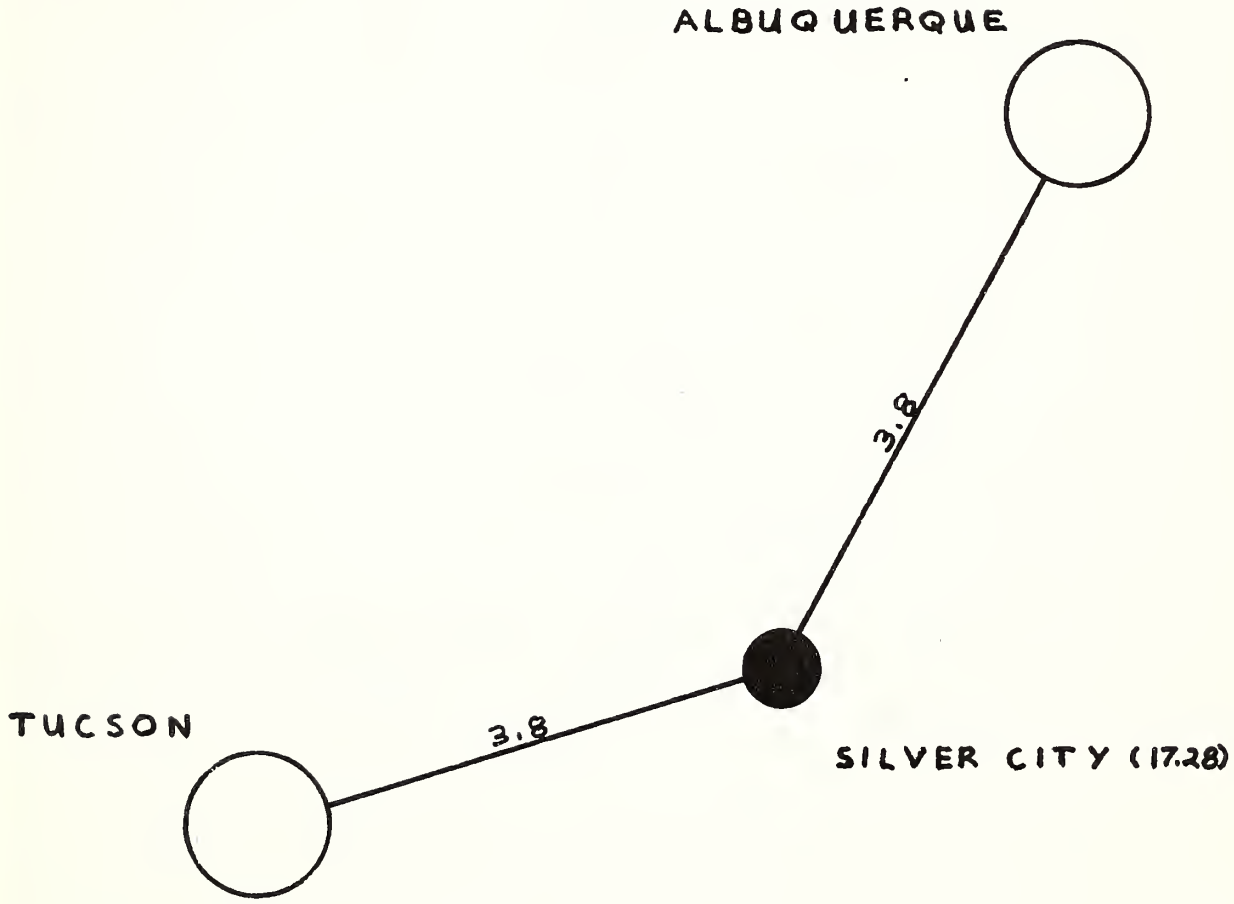
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Hot Springs	$45,000	35,000	1947	Hot Springs-TXI

1/ Excludes certain flights operated primarily to service O&D traffic at other points.

MARGINAL ROUTE ANALYSIS G-14

SERVICE TO SILVER CITY, NEW MEXICO
Marginal points in black



Notes
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS G-14

SERVICE TO SILVER CITY, NEW MEXICO

Flight Segment Data[1/]

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Silver City						
- Albuquerque	189	1,392	3.8	37,125	101.7	26.7
- Tucson	169	1,388	3.8	32,826	90.0	23.6

1/ Excluding irregular operations.
Source: Special Frontier reports to the Board.

MARGINAL ROUTE ANALYSIS G-14

SERVICE TO SILVER CITY, NEW MEXICO

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$281,000	$22.39	$ -
Aircraft operating expense	349,000	27.81	1.24
Servicing	152,000	12.11	.54
Total operating expense	501,000	39.92	1.78
Operating loss	220,000	17.53	.78
Return and tax requirement	78,000	6.22	.28
Subsidy need	$298,000	$23.75	$1.06

Net effect of suspension/deletion at the five cities 2/

On-system revenue retained, net of expense	$ 18,000
Subsidy need decrease	$316,000

Statistics (1969 operations)

Aircraft departures 1/	2,100
Revenue miles 1/	274,602
O&D passengers	12,549
Revenue passenger miles	3,292,000

Additional Data

	1969 Station Expense(Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Silver City-Hurley-Deming	$36,000	18,000	1948	Tucson 150 miles

1/ Excludes certain flights operated primarily to service O&D traffic at other points.
2/ Assumes that a replacement carrier would operate Tucson-Silver City-Albuquerque (no provision made for support thereof by Frontier).

CITIES INCLUDED IN FRONTIER'S 1969 MARGINAL ROUTES

Station	Average Daily Originating Passengers	Daily Departures
Alamosa, Colo.	19.01	3.8
Alliance, Neb.	6.88	3.4
Amarillo, Tex.	21.36	1.7
Bartlesville, Okla.	5.67	3.2
Borger, Tex. 3/	2.95	1.5
Chadron, Neb.	9.24	3.3
Columbus, Neb.	6.48	3.4
Cortez, Colo.	11.43	3.6
Duncan, Okla.	6.56	2.9
Durango, Colo.	39.58	5.6
Enid, Okla.	11.41	3.6
Flagstaff, Ariz.	23.73	3.8
Ft. Leonard Wood, Mo.	24.92	3.6
Gallup, N. M.	16.67	3.8
Garden City, Kan.	13.78	3.5
Glasgow, Mont.	5.33	1.8
Glendive, Mont.	5.70	1.8
Goodland, Kan.	4.73	1.7
Great Bend, Kan. 2/	7.94	2.5
Gunnison, Colo.	10.95	1.8
Harrison, Ark.	14.67	3.6
Hastings, Neb.	17.11	3.6
Havre, Mont.	3.02	1.8
Hays, Kan.	17.86	3.5
Hot Springs, Ark.	20.88	3.7
Hutchinson, Kan. 2/	8.81	3.4
Independence/Coffeyville/Parsons, Kan.	11.78	3.2
Kearney, Neb.	17.66	3.6
Lamar, Colo.	3.24	1.6
Laramie, Wyo.	15.01	3.5
Lewistown, Mont.	1.67	1.8
Liberal, Kan./Guymon, Okla.	29.65	4.6
Lovell/Powell/Cody, Wyo.	9.70	2.8
McCook, Neb.	12.21	3.5
Miles City, Mont.	3.80	1.8

CITIES INCLUDED IN FRONTIER'S 1969 MARGINAL ROUTES

Station	Daily Originating Passengers	Daily Departures
Moab, Utah	6.02	2.6
Montrose/Delta, Colo.	17.92	3.8
Muskogee, Okl 1/	2.16	1.9
North Platte, Neb.	35.21	5.4
Paris, Tex. 1/	3.07	1.9
Ponca City, Okla.	9.57	3.5
Riverton/Lander, Wyo.	26.06	4.6
Rock Springs, Wyo.	13.75	3.7
Santa Fe, N. M.	23.61	3.8
Sidney, Neb.	4.84	3.5
Silver City/Hurley/Deming, N.M.	17.28	3.8
Steamboat Springs/Hayden/Craig, Colo.	10.39	1.9
St. Joseph, Mo.	4.64	3.7
Stillwater, Okla.	7.51	2.9
Tulsa, Okla.	36.22	5.5
Vernal, Utah	9.15	1.9
Wichita, Kan.	14.24	4.0
Williston, N.D.	14.73	2.9
Winslow, Ariz.	8.28	3.8
Wolf Point, Mont.	4.59	1.8
Worland, Wyo.	10.93	3.7

1/ Temporary suspension authorized subject to termination if replacement carrier fails to provide a minimum level of service (Order 70-11-25).
2/ Temporary suspension authorized subject to Air Midwest maintaining a minimum level of service (Order 70-8-31).
3/ Temporary exemption granted to serve Borger through Amarillo as the hyphenated point Amarillo/Borger (Order 70-5-121).

CITIES ORIGINATING FEWER THAN 40 DAILY PASSENGERS BUT NOT INCLUDED IN FRONTIER'S MARGINAL ROUTES

Authorized Point	Key	Daily Originating Passengers	Daily Departures
Alamagordo/Holloman A.F.B., N.M.	1/	24.97	3.8
Bozeman, Mont.	1/	20.34	4.2
El Paso, Texas	1/	22.47	2.0
Missoula, Mont.	1/	34.48	3.8
Pueblo, Colo.	2/	38.96	6.6
Salina, Kan.	2/	38.82	6.3
Topeka, Kan.	2/	33.39	7.1
West Yellowstone, Mont.	1/	18.83	1.9

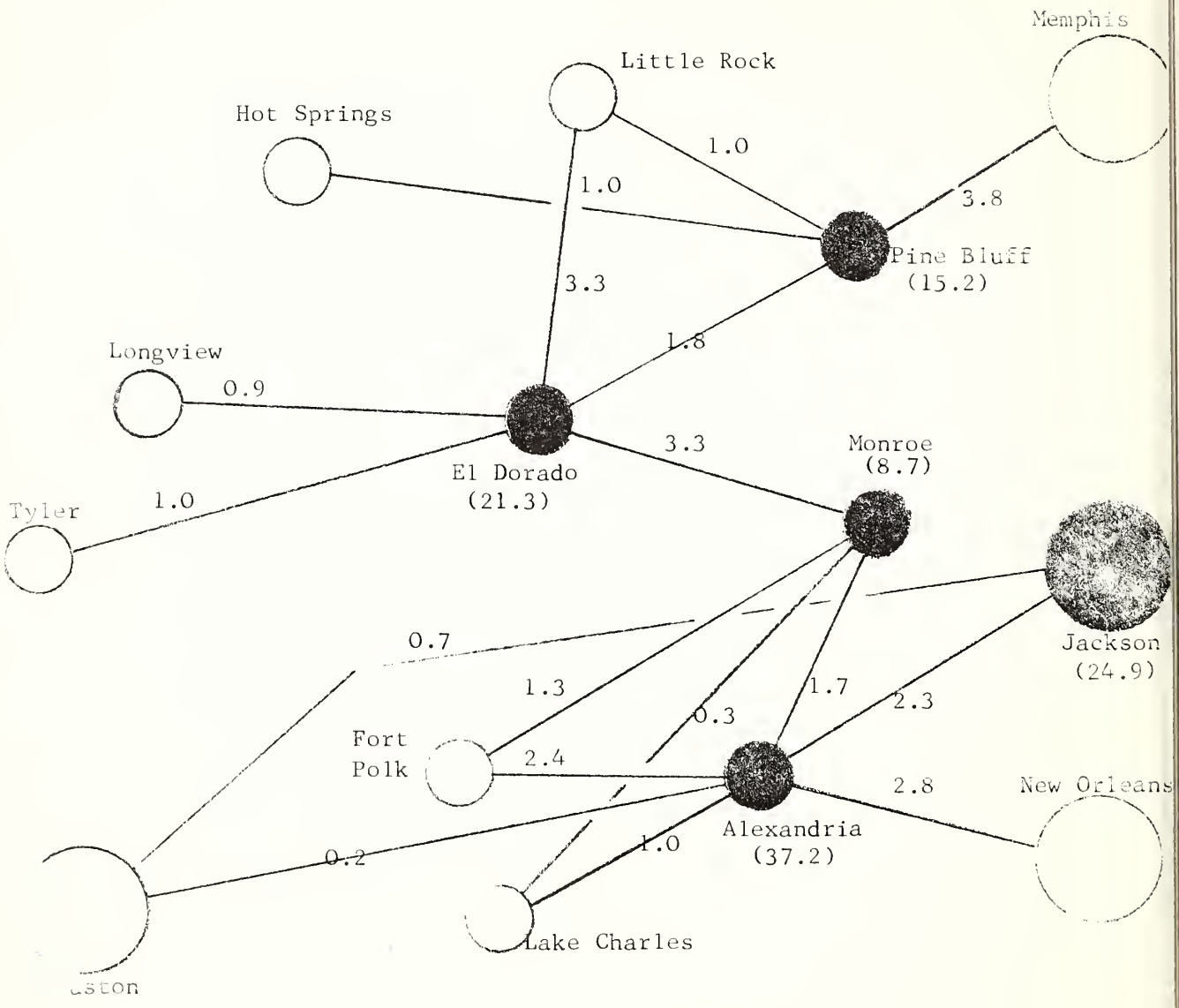
Key to exclusion from marginal system :

1/ Services to city produced an operating profit.
2/ Over 6 departures per day (2,190 per year).

NON-HUB CITIES ORIGINATING 40 OR MORE FRONTIER PASSENGERS PER DAY

	Daily Originating Passengers	Daily Departures	Equipment
Bismarck/Mandan, N.D.	42.41	3.5	CV-580, B-727-100/200, B-737-200
Casper Wyo.	72.63	9.6	CV-580, B-727-100/200, B-737-200
Cheyenne, Wyo.	41.74	8.3	CV-580
Farmington, N.M.	63.46	9.7	CV-580
Fayetteville, Ark.	79.47	9.3	CV-580
Grand Island, Neb.	41.71	5.5	CV-580
Jackson, Wyo.	51.64	4.0	CV-580
Joplin, Mo.	41.70	4.0	CV-580
Lawton/Ft. Sill, Okla.	136.41	8.7	CV-580, CV-600
Manhattan/Junction City/ Ft. Riley, Kan.	86.05	8.8	CV-580, CV-600
Minot, N.D.	41.68	2.8	CV-580, B-727-100/200, B-737-200
Scottsbluff, Neb.	49.53	7.3	CV-580

MARGINAL ROUTE ANALYSIS K-1
ALEXANDRIA AND MONROE, LOUISIANA; EL DORADO AND
PINE BLUFF, ARKANSAS; AND JACKSON, MISSISSIPPI
(Marginal Points In Black)



Notes:
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: CV-600 equipment, except for Houston-Jackson. (see discussion Supra.) Number of average daily flights operated shown on each segment.
(3) Since 1969 Texas International has inaugurated Beech 99 service at El Dorado and Pine Bluff. Based upon April 15, 1971 schedules, both CV-600 and Beech 99 equipment serve these two points.

MARGINAL ROUTE ANALYSIS K-1
SERVICE TO ALEXANDRIA AND MONROE, LOUISIANA; EL DORADO AND PINE BLUFF, ARKANSAS; AND JACKSON, MISSISSIPPI

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Alexandria-						
Houston	210	60	.2	821	2.2	13.7
Jackson	145	823	2.3	13,406	36.7	16.2
Lake Charles	104	350	1.0	3,377	9.3	9.6
Monroe	79	630	1.7	8,751	24.0	13.6
New Orleans	156	1,040	2.8	25,314	69.3	24.3
Fort Polk	58	873	2.4	17,542	48.1	20.0
El Dorado-						
Little Rock	110	1,203	3.3	15,612	42.8	12.9
Longview	125	320	.9	2,319	6.4	7.2
Monroe	66	1,190	3.3	16,206	44.4	13.6
Pine Bluff	83	668	1.8	6,400	17.5	9.5
Tyler	161	347	1.0	3,819	10.5	11.0
Jackson-						
Houston	350	207	.7	2,332	6.4	11.3
Monroe-						
Lake Charles	179	108	.3	1,073	2.9	9.9
Fort Polk	122	465	1.3	7,932	21.7	17.0
Pine Bluff-						
Hot Springs	69	354	1.0	7,709	21.1	21.7
Little Rock	43	350	1.0	8,675	23.8	24.7
Memphis	128	1,388	3.8	27,621	75.7	19.8
Other	-	142	-	1,527	4.2	-

Source: Special Texas International reports to the Board.

MARGINAL ROUTE ANALYSIS K-1
SERVICE TO ALEXANDRIA AND MONROE, LOUISIANA; EL DORADO AND PINE BLUFF, ARKANSAS; AND JACKSON, MISSISSIPPI

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$1,503,073	$20.74	$ -
Aircraft operating expense	1,407,151	19.42	.94
Servicing	880,224	12.15	.58
Total operating expense	2,287,375	31.57	$1.52
Operating loss	$ 784,302	$10.82	.52
Return and tax requirement	351,292	4.85	.23
Subsidy need	$1,135,594	$15.67	$ .75

Net effect of suspension/deletion at the five cities 1/

On-system revenue retained, net of expense	$ 175,026
Subsidy need decrease	$1,310,620

Statistics (1969 operations)

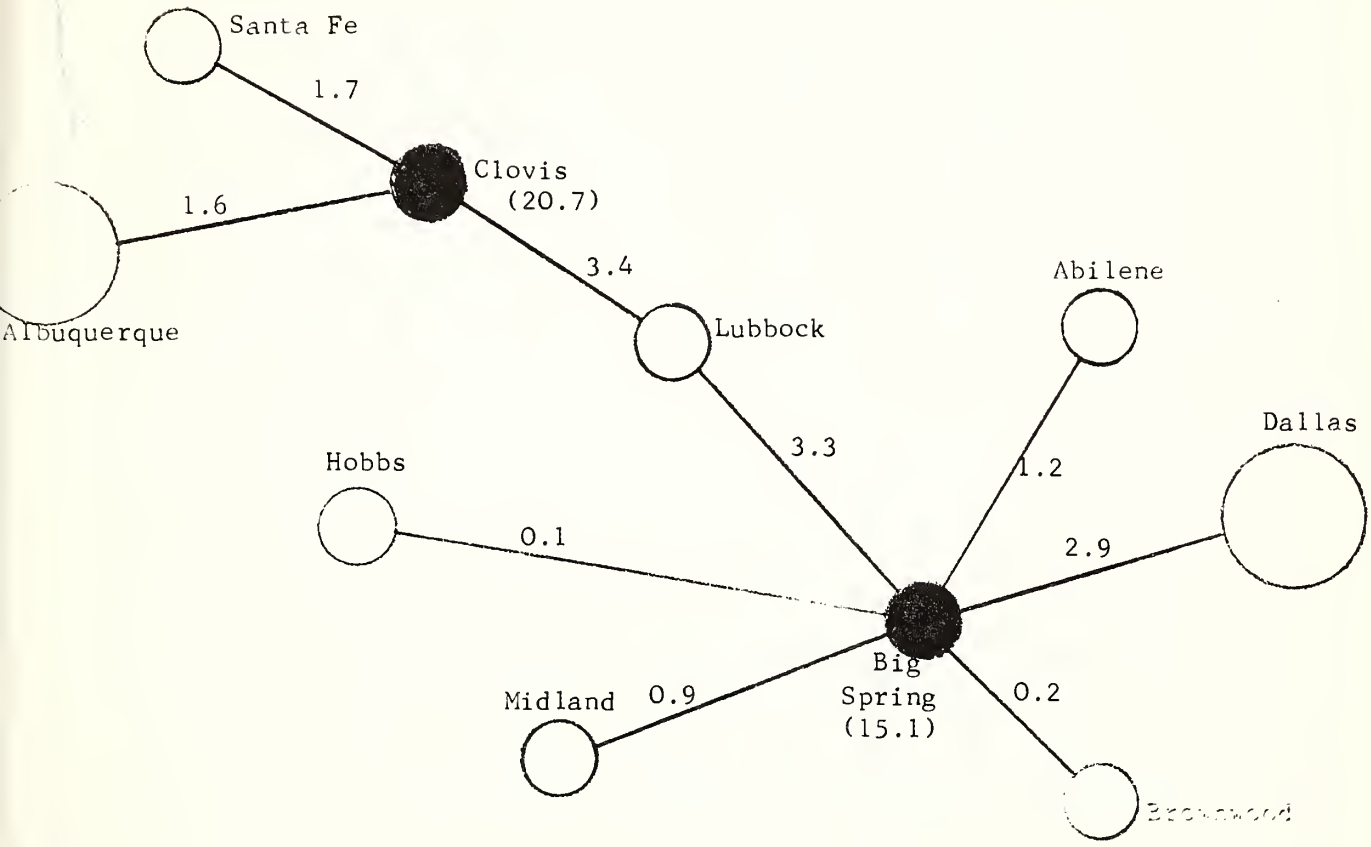
Aircraft departures	10,518
Revenue miles	1,182,463
O&D passengers	72,460
Revenue passenger miles	15,875,000

Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Alexandria	$67,903	41,000	1943	Alexandria Delta
El Dorado	$57,007	39,000	1945	Texarkana 89 mi.
Jackson	$61,335	150,000	1938	Jackson Delta and Southern
Monroe	$35,484	55,000	1938	Monroe Delta and Southern
Pine Bluff	$34,696	56,000	1940	Little Rock 42 mi.

1/ Assumes an air taxi Texarkana-El Dorado-Pine Bluff-Little Rock and an air taxi Jackson-Alexandria-Lake Charles (no provision has been included for support thereof by Texas International).

MARGINAL ROUTE ANALYSIS K-2
CLOVIS, NEW MEXICO AND BIG SPRING, TEXAS
(Marginal Points in Black)



Notes:
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: CV-600 equipment. Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS K-2

SERVICE TO BIG SPRING, TEXAS AND CLOVIS, NEW MEXICO

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Big Spring-						
Abilene	100	427	1.2	4,382	12.0	10.2
Brownwood	150	89	.2	991	2.7	11.1
Dallas	270	1,068	2.9	22,238	60.9	20.8
Hobbs	107	29	.1	668	1.8	23.0
Lubbock	101	1,219	3.3	17,810	48.8	14.6
Midland	52	339	.9	462	1.3	1.3
Clovis-						
Albuquerque	206	598	1.6	5,055	13.8	8.4
Lubbock	89	1,235	3.4	16,118	44.2	13.0
Santa Fe	190	634	1.7	8,364	22.9	13.1
Other	-	6	-	108	.3	18.0

Source: Special Texas International reports to the Board.

MARGINAL ROUTE ANALYSIS K-2
BIG SPRING, TEXAS AND CLOVIS, NEW MEXICO

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 704,923	$26.88	$ -
Aircraft operating expense	889,970	33.93	1.26
Servicing	407,037	15.52	.58
Total operating expense	1,297,007	49.45	1.84
Operating loss	$ 592,084	$22.57	$ .84
Return and tax requirement	215,242	8.21	.31
Subsidy need	$ 807,242	$30.78	$1.15

Net effect of suspension/deletion at the two cities 1/

On-system revenue retained, net of expense	$153,326
Subsidy need decrease	$960,568

Statistics (1969 operations)

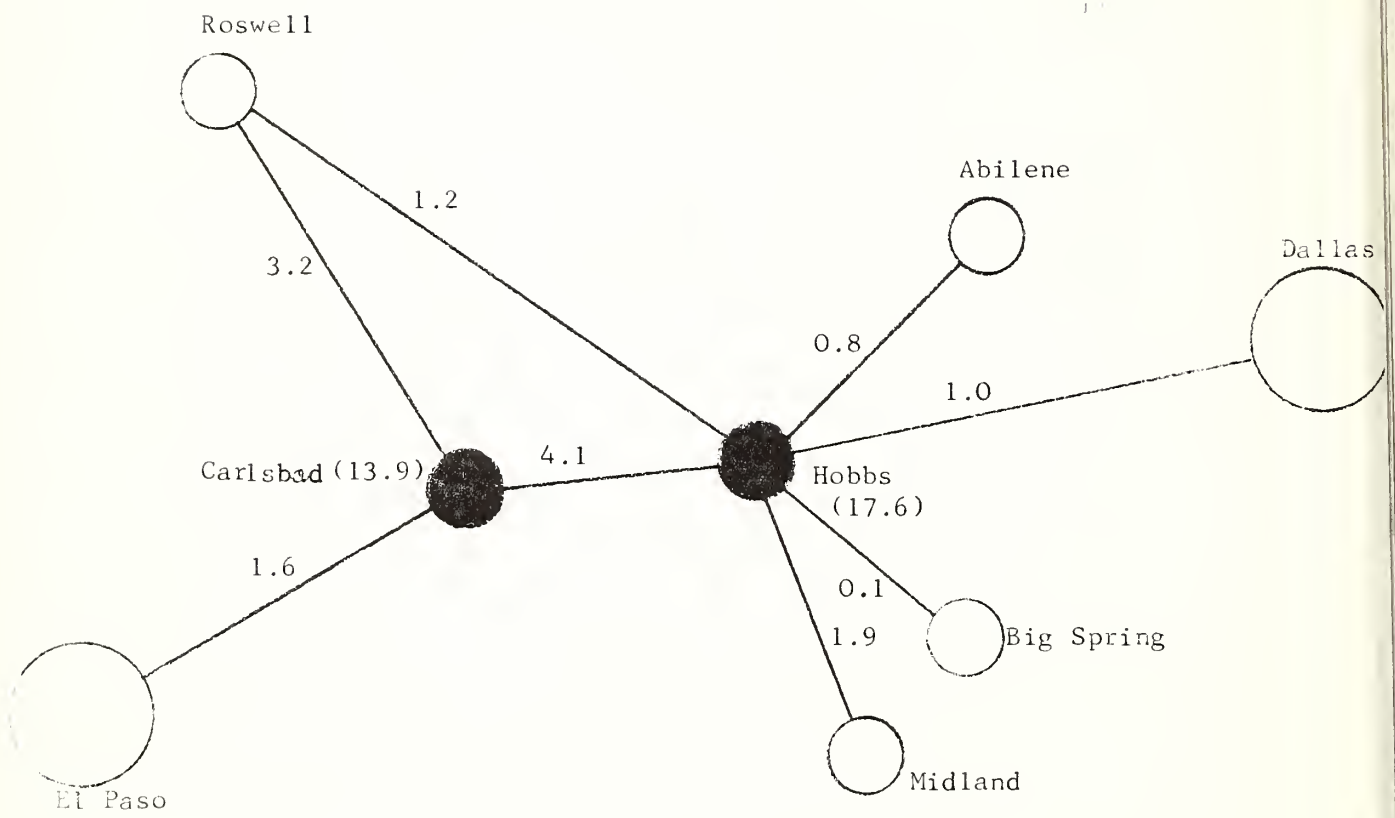
Aircraft departures	5,644
Revenue miles	842,620
O&D passengers	26,228
Revenue passenger miles	8,485,000

Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Big Spring	$31,423	28,000	1938	Midland 59 miles
Clovis	$31,106	28,000	1948	Lubbock 97 miles

1/ Assumes that a replacement service would operate Clovis-Lubbock-Big Spring-Brownwood-Dallas (no provision has been included for support thereof by Texas International).

MARGINAL ROUTE ANALYSIS K-3
CARLSBAD AND HOBBS, NEW MEXICO
(Marginal Points in Black)



Notes:
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: CV-600 equipment. Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS K-3
SERVICE TO CARLSBAD AND HOBBS, NEW MEXICO

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Carlsbad-						
El Paso	133	601	1.6	4,482	12.3	7.4
Hobbs	65	1,510	4.1	16,363	44.8	10.8
Roswell	68	1,180	3.2	15,014	41.1	12.7
Hobbs-						
Abilene	202	281	.8	6,217	17.0	22.1
Big Spring	107	29	.1	668	1.8	23.0
Dallas	369	350	1.0	3,245	8.9	9.2
Midland	77	692	1.9	8,485	23.2	12.2
Roswell	87	422	1.2	5,815	15.9	13.7
Other	-	21	-	301	.8	14.3

Source: Special Texas International reports to the Board.

MARGINAL ROUTE ANALYSIS K-3
CARLSBAD AND HOBBS, NEW MEXICO

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$556,171	$26.15	$ -
Aircraft operating expense	649,608	30.54	1.17
Servicing	342,301	16.10	.61
Total operating expense	991,909	46.64	1.78
Operating loss	$435,738	$20.49	.78
Return and tax requirement	151,334	7.11	.28
Subsidy need	$587,072	$27.60	$1.06

Net effect of suspension/deletion at the two cities 1/

On-system revenue retained, net of expense	$140,465
Subsidy need decrease	$727,537

Statistics (1969 operations)

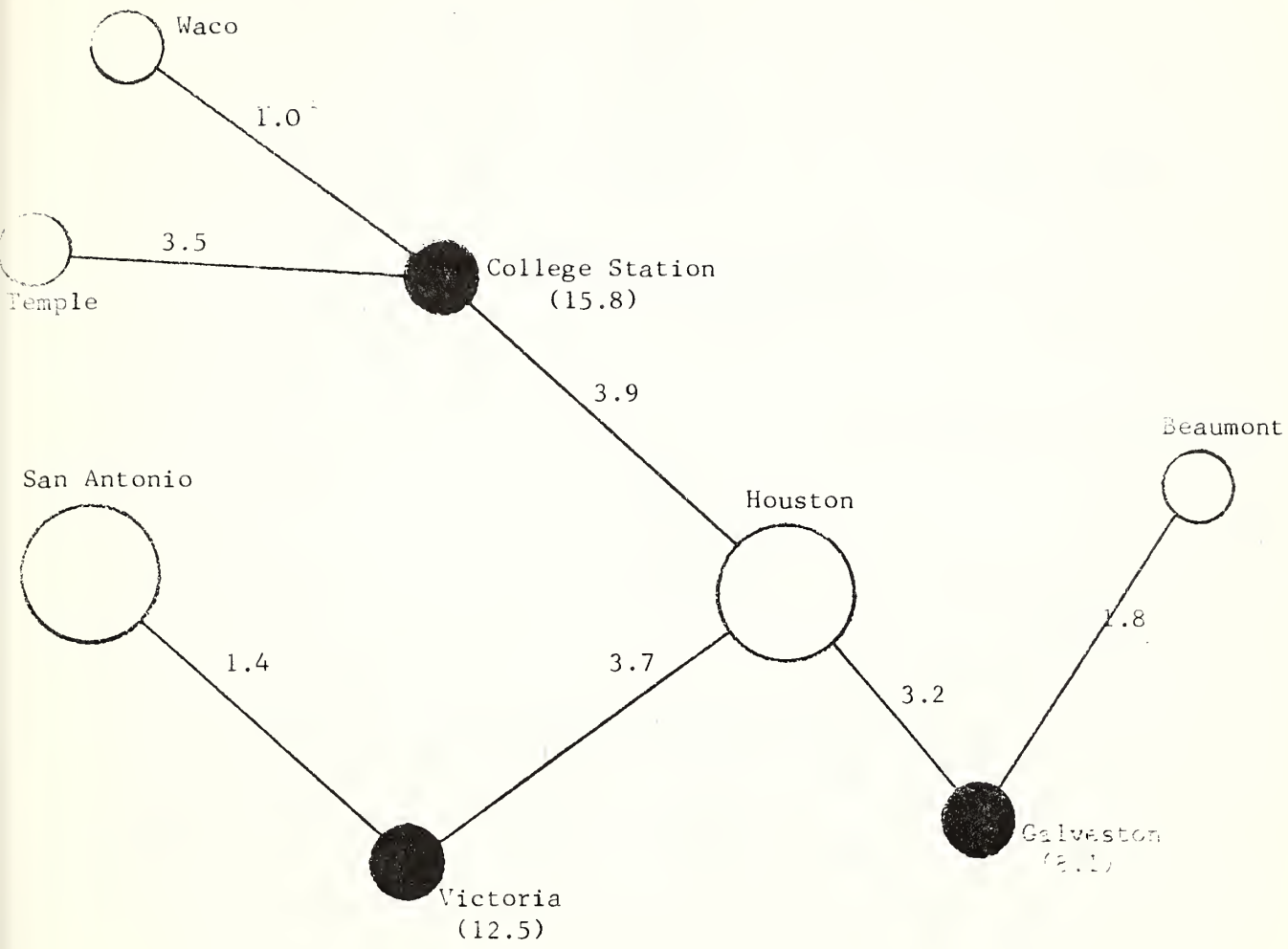
Aircraft departures	5,086
Revenue miles	541,291
O&D passengers	21,267
Revenue passenger miles	6,550,000

Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point	
Carlsbad	$30,932	21,000	1940	Roswell	79 miles
Hobbs	$29,835	26,000	1940	Midland	89 miles

1/ Assumes replacement service would operate Roswell-Carlsbad-Hobbs-Midland (no provision has been included for support thereof by Texas International).

MARGINAL ROUTE ANALYSIS K-4
COLLEGE STATION, GALVESTON AND VICTORIA, TEXAS
(Marginal Points in Black)



Notes:
(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: CV-600 equipment. Number of average daily flights operated shown on each segment.
(3) Since 1969, Texas International has inaugurated Beech 99 service at all three marginal points. Based upon April 15, 1971 schedules both CV-600 and Beech 99 equipment serve College Station and Galveston. All of Victoria's current is provided with the Beech 99.

MARGINAL ROUTE ANALYSIS K-4
SERVICE TO COLLEGE STATION, GALVESTON AND VICTORIA, TEXAS

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
College Station-						
Houston	74	1,433	3.9	12,275	33.6	8.6
Temple	74	1,274	3.5	11,905	32.6	9.3
Waco	88	376	1.0	3,757	10.3	9.9
Galveston-						
Beaumont	70	658	1.8	8,038	22.0	12.2
Houston	57	1,167	3.2	12,252	33.6	10.5
Victoria-						
Houston	123	1,367	3.7	14,595	40.0	10.7
San Antonio	105	500	1.4	7,521	20.6	15.0
Other	-	59	-	799	2.2	13.5

Source: Special Texas International reports to the Board.

MARGINAL ROUTE ANALYSIS K-4
COLLEGE STATION, GALVESTON AND VICTORIA, TEXAS

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 535,278	$24.14	$ -
Aircraft operating expense	670,710	30.25	1.25
Servicing	385,746	17.40	.72
Total operating expense	1,056,456	47.65	1.97
Operating loss	$ 521,178	$23.51	$ .97
Return and tax requirement	150,335	6.79	.29
Subsidy need	$ 671,913	$30.30	$1.26

Net effect of suspension/deletion at the three cities 1/

On-system revenue retained, net of expense	$ 40,704
Subsidy need decrease	$712,217

Statistics (1969 operations)

Aircraft departures 2/	6,232
Revenue miles 2/	483,048
O&D passengers	22,172
Revenue passenger miles	5,062,000

Additional Data

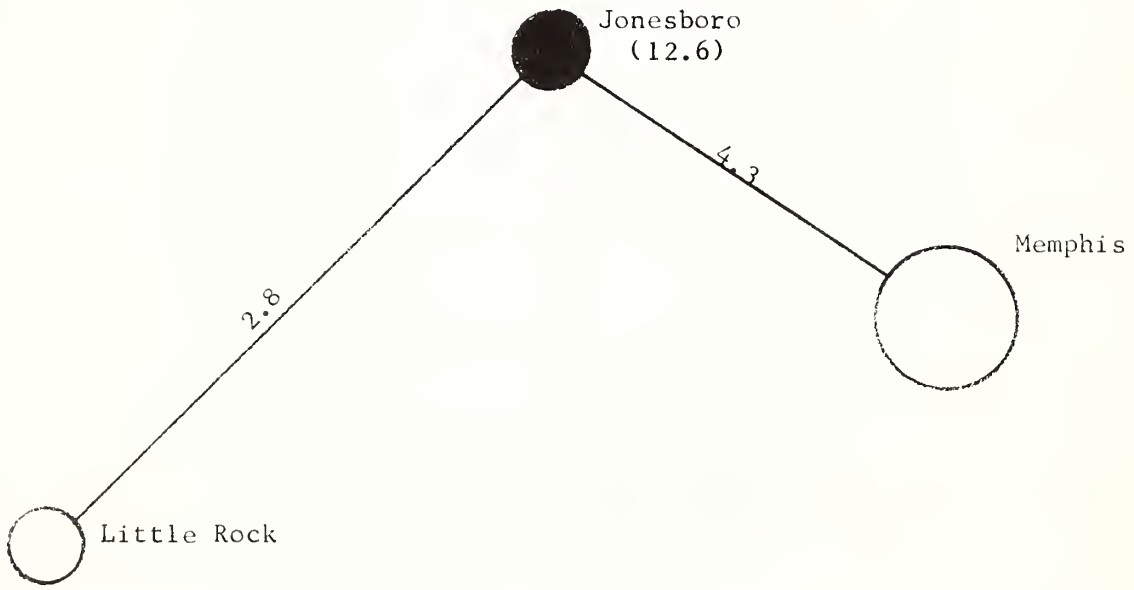
	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
College Station	$46,503	50,000	1946	Houston 104 miles
Galveston	$26,832	61,000	1938	Houston 50 miles
Victoria	$33,902	39,000	1946	Corpus Christi 93 miles

1/ Assumes existing air taxi (Davis Airlines) would continue College Station-Dallas service and would also serve the College Station-Houston-Victoria markets. (No provision has been included for support thereof by Texas International.

2/ Excludes certain flights operated primarily to serve O&D traffic at other points.

MARGINAL ROUTE ANALYSIS K-5

JONESBORO, ARKANSAS
(Marginal Point Shown in Black)



Notes:

(1) 1969 daily passengers originating at marginal point shown after city name.

(2) 1969 operations: CV-600 equipment. Number of average daily flights operated shown on each segment.

(3) Since 1969 Texas International has inaugurated Beech 99 service at Jonesboro. Based upon April 15, 1971 schedules, all of Jonesboro's current service is provided with the Beech 99.

MARGINAL ROUTE ANALYSIS K-5

SERVICE TO JONESBORO, ARKANSAS

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Jonesboro -						
Little Rock	117	1,010	2.8	9,184	25.2	9.0
Memphis	66	1,569	4.3	9,868	27.0	6.2

Source: Special Texas International reports to the Board.

MARGINAL ROUTE ANALYSIS K-5

JONESBORO, ARKANSAS

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$205,085	$ 23.86	$ -
Aircraft operating expense	292,259	34.01	1.42
Servicing	165,514	19.26	81
Total operating expense	457,773	53.27	2.23
Operating loss	$252,688	$ 29.41	$ 1.23
Return and tax requirement	66,216	7.70	.32
Subsidy need	$318,904	$ 37.11	$ 1.55

Net effect of suspension/deletion at the city [1/]

On-system revenue retained, net of expense	$11,238
Subsidy need decrease	$330,142

Statistics (1969 operations)

Aircraft departures	2,579
Revenue miles	221,724
O&D passengers	8,594
Revenue passenger miles	1,713,000

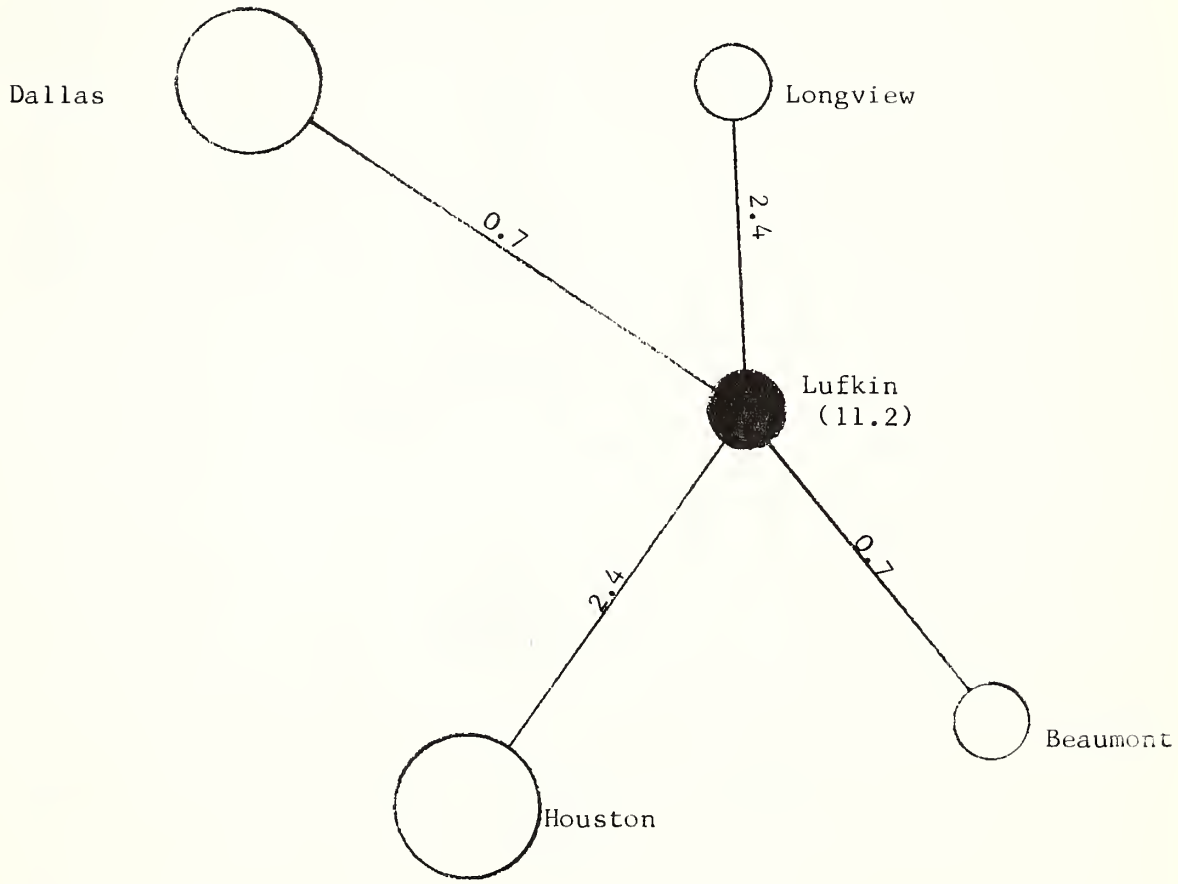
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point	
Jonesboro	$32,251	27,000	1961	Memphis	87 miles

1/ Assumes air taxi Jonesboro-Memphis (no provision has been included for support therefore by Texas International.)

MARGINAL ROUTE ANALYSIS K-6

LUFKIN, TEXAS
(Marginal Point Shown in Black)



Notes:

(1) 1969 daily passengers originating at marginal point shown after city name.

(2) 1969 operations: CV-600 equipment. Number of average flights operated shown on each segment.

(3) Since 1969 Texas International has inaugurated Beech 99 service at Lufkin. Based upon April 15, 1971 schedules, all of Lufkin's current service is provided with the Beech 99.

MARGINAL ROUTE ANALYSIS K-6

SERVICE TO LUFKIN, TEXAS

Flight Segment Data

	Mileage	1969 Trips	Trips Per day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Lufkin -						
Beaumont	98	265	.7	3,997	11.0	15.0
Dallas	166	266	.7	5,126	14.0	19.2
Houston	93	884	2.4	8,420	23.1	9.5
Longview	80	881	2.4	8,286	22.7	9.4
Other	-	2	-	28	-	14.0

Source: Special Texas International reports to the Board.

MARGINAL ROUTE ANALYSIS K-6

LUFKIN, TEXAS

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$155,791	$19.71	$ -
Aircraft operating expense	284,156	35.95	1.82
Servicing	124,719	15.78	.80
Total operating expense	408,875	51.73	$2.62
Operating loss	$253,084	32.02	1.62
Return and tax requirement	65,749	8.32	.43
Subsidy need	$318,833	$40.34	$2.05

Net effect of suspension/deletion at the city 1/

On-system revenue retained, net of expense	$48,388
Subsidy need decrease	$367,221

Statistics (1969 operations)

Aircraft departures	2,298
Revenue miles	231,194
O&D passengers	7,903
Revenue passenger miles	1,228,000

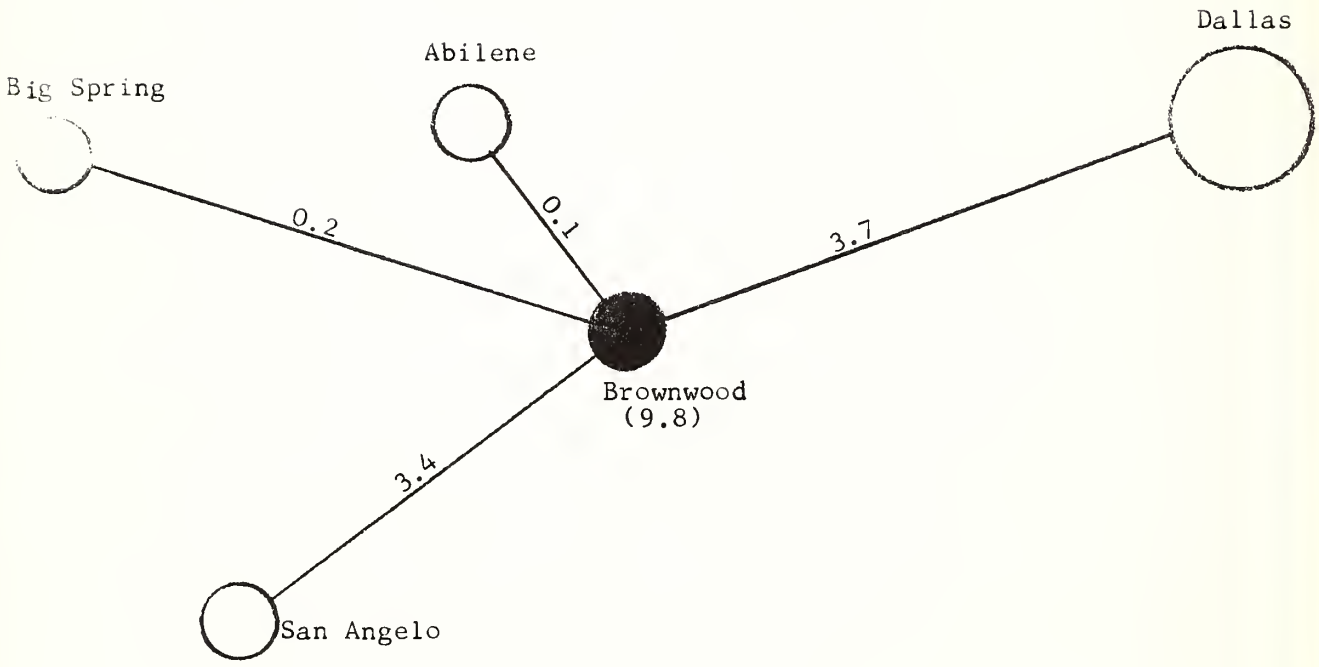
Additional Data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point	
Lufkin	$ 31,066	24,000	1946	Tyler	85 miles

1/ Assumes that Lufkin traffic would travel by air taxi to Tyler or Beaumont (no provision has been included for support thereof by Texas International).

MARGINAL ROUTE ANALYSIS K-7

BROWNWOOD, TEXAS
(Marginal Point Shown in Black)



Notes:

(1) 1969 Daily passengers originating at marginal point shown after city name.

(2) 1969 Operations: CV-600 Equipment. Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS K-7

SERVICE TO BROWNWOOD, TEXAS

Flight Segment Data

	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Brownwood						
Abilene	60	29	.1	333	.9	11.4
Big Spring	150	89	.2	991	2.7	11.1
Dallas	143	1,345	3.7	28,950	79.3	21.5
San Angelo	97	1,229	3.4	21,059	57.7	17.1
Other	-	1	-	19	-	17.1

Source: Special Texas International reports to the Board.

MARGINAL ROUTE ANALYSIS K-7

BROWNWOOD, TEXAS

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$145,581	$19.74	$ -
Aircraft operating expense	136,034	18.44	.93
Servicing	102,744	13.93	.71
Total operating expense	238,778	32.37	1.64
Operating loss	$ 93,197	$12.63	$ .64
Return and tax requirement	28,178	3.82	.19
Subsidy need	$121,375	$16.45	$ .83

Net effect of suspension/deletion at the city 1/

On-system revenue retained, net of expense	$12,600
Subsidy need decrease	$133,975

Statistics (1969 operations)

Aircraft departures 2/	2,693
Revenue miles 2/	326,849
O&D passengers	7,377
Revenue passenger miles	1,262,000

Additional data

	1969 Station Expense (Form 41)	Population (1970)	Certificated Service Since	Closest Remaining Certificated Point
Brownwood	$29,543	16,000	1946	Abilene 83 miles

1/ Assumes that a replacement service would operate Clovis-Lubbock-Big Spring-Brownwood-Dallas (no provision has been included for support thereof by Texas International).

2/ Excludes certain flights operated primarily to service O&D traffic at other points.

CITIES INCLUDED IN TEXAS INTERNATIONAL'S 1969 MARGINAL ROUTES

	Average Daily Orignating Passengers	Daily Departures
Alexandria, La.	37.21	5.2
Big Spring, Tex.	15.05	4.3
Brownwood, Tex.	9.82	3.7
Carlsbad, N. M.	13.89	4.5
Clovis, N. M.	20.69	3.4
College Station/Bryan, Tex.	15.78	4.3
El Dorado/Camden, Ark.	21.31	5.2
Galveston, Tex.	8.15	2.5
Hobbs, N. M.	17.64	4.5
Jackson, Miss.	24.90	1.4
Jonesboro, Ark.	12.62	3.5
Lufkin, Tex.	11.19	3.1
Monroe, La.	8.67	3.3
Pine Bluff, Ark.	15.16	3.8
Victoria, Tex.	12.48	2.6

Note: All service provided with CV-600 equipment with the exception of Jackson which had an average of 0.3 daily departures with DC-9 equipment, discontinued on October 25, 1969.

Source: Appendix K; Form 41's.

CITIES ORIGINATING FEWER THAN
40 DAILY PASSENGERS BUT NOT
INCLUDED IN TEXAS INTERNATIONAL'S MARGINAL ROUTES

	Key	Daily Originating Passengers	Daily Departures	Equipment
El Paso, Tex.	2/	26.08	1.8	CV-600, DC-9-10/30
Longview/Kilgore/ Gladewater, Tex.	1/	31.50	7.3	CV-600
Lubbock, Tex.	2/	36.83	5.9	CV-600, DC-9-10/30
Monterrey, Mex.	2/ 3/	28.31	1.0	DC-9-10/30
Santa Fe, N.M.	2/	21.93	3.4	CV-600, DC-9-10/30
Tampico, Mex.	3/	6.25	.9	CV-600
Temple, Tex.	1/	39.73	7.6	CV-600
Tyler, Tex.	1/	28.15	7.0	CV-600
Veracruz, Mex.	3/	4.71	.4	CV-600

Key to exclusion from marginal system:

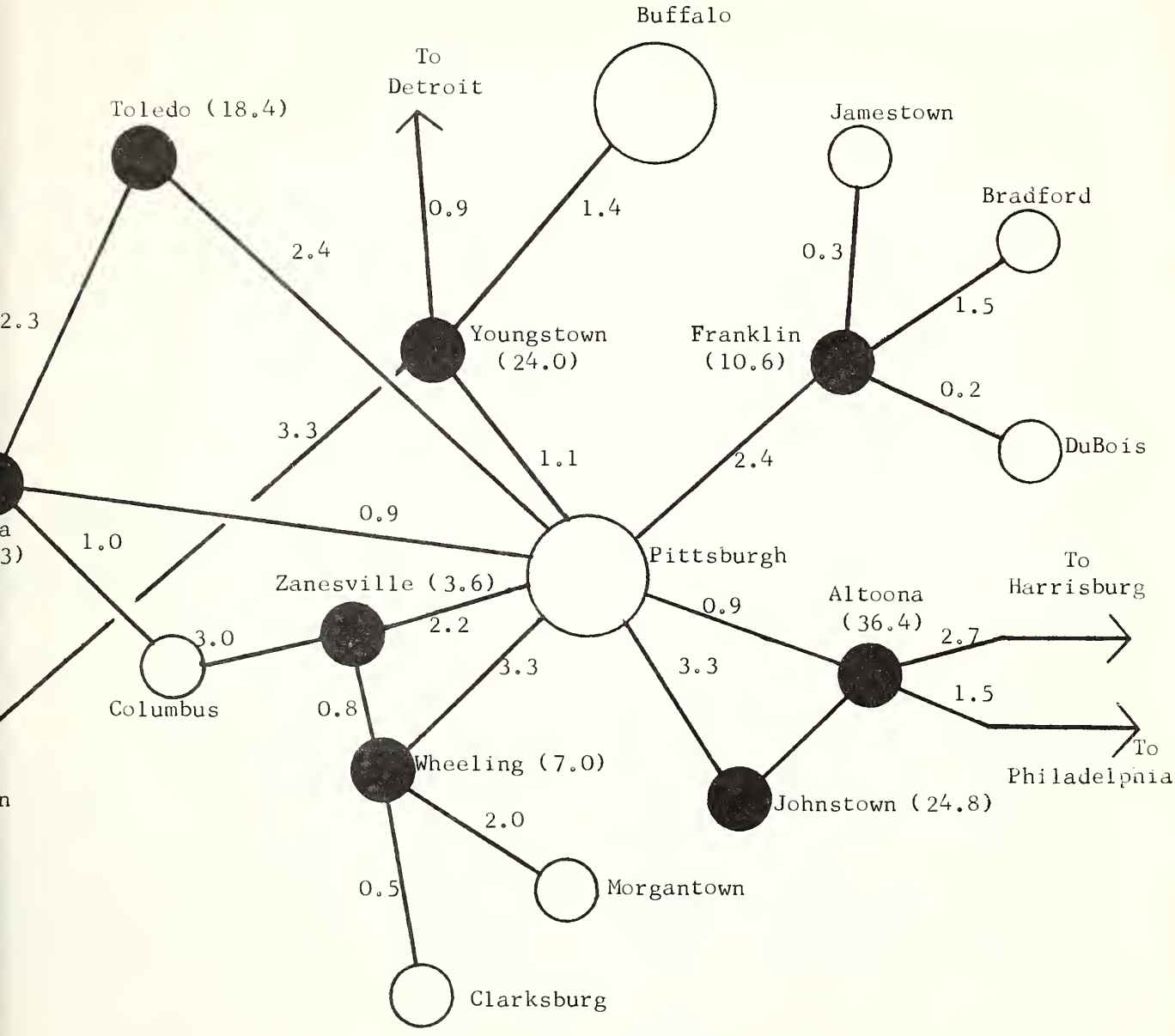
1/ Over 6 departures per day (2,190 per year).
2/ Point receiving jet service.
3/ Foreign city.

NON-HUB CITIES ORIGINATING 40 OR MORE
TEXAS INTERNATIONAL PASSENGERS PER DAY

	Daily Originating Passengers	Daily Departures	Equipment
Abilene, Tex.	111.59	8.1	CV-600, DC-9-10/30
Fort Polk, La.	72.80	7.2	CV-600
Hot Springs, Ark.	56.38	6.8	CV-600, DC-9-10/30
Lafayette, La.	166.58	13.6	CV-600
Lake Charles, La.	105.93	12.8	CV-600, DC-9-10/30
Laredo, Tex.	43.61	5.3	CV-600, DC-9-10/30
Mission/McAllen/Edinburg, Tex.	93.37	8.8	CV-600, DC-9-10/30
Roswell, N.M.	51.75	6.5	CV-600, DC-9-10/30
San Angelo, Tex.	77.48	7.1	CV-600, DC-9-10/30
Texarkana, Ark.	67.26	7.6	CV-600
Waco, Tex.	52.89	9.8	CV-600

Not used

MARGINAL ROUTE ANALYSIS P-1
ALTOONA, FRANKLIN AND JOHNSTOWN, PENNSYLVANIA, LIMA, TOLEDO, YOUNGTOWN AND ZANESVILLE, OHIO, AND WHEELING, WEST VIRGINIA
(Marginal points in Black)



TES
) 1969 daily passengers originating at each marginal point shown after
ty name.
) 1969 operations: N-262, F-27J and CV-580 equipment. Number of average daily
ights operated shown on each segment.
) Allegheny suspended at Franklin on December 31, 1969, Zanesville on January 15,
70, Johnstown on April 25, 1970, and Wheeling on June 1, 1970. Franklin and
hnstown were transferred to scheduled air taxi operators.

MARGINAL ROUTE ANALYSIS P-1
ALTOONA, FRANKLIN AND JOHNSTOWN, PENNSYLVANIA, LIMA, TOLEDO, YOUNGSTOWN AND ZANESVILLE, OHIO, AND WHEELING, WEST VIRGINIA

Flight Segment Data	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Altoona-						
Harrisburg	83	972	2.7	27,676	75.8	28.5
Johnstown	27	1,080	3.0	23,342	64.0	21.6
Philadelphia	166	534	1.5	12,658	34.8	23.7
Pittsburgh	101	323	.9	9,559	26.2	29.6
Franklin-						
Bradford	70	546	1.5	3,689	10.1	6.8
Dubois	52	83	.2	835	2.3	10.1
Jamestown	62	104	.3	1,373	3.8	13.2
Pittsburgh	64	887	2.4	11,683	32.0	13.2
Johnstown-						
Pittsburgh	74	1,209	3.3	25,066	68.7	20.7
Lima-						
Columbus	78	355	1.0	1,582	4.3	4.6
Pittsburgh	200	320	.9	3,200	8.8	10.0
Toledo	62	828	2.3	1,082	3.0	13.1
Toledo-						
Pittsburgh	203	873	2.4	11,796	32.3	13.5
Wheeling-						
Clarksburg	65	184	.5	2,765	7.6	15.0
Morgantown	54	714	2.0	7,542	20.7	10.6
Pittsburgh	32	1,194	3.3	16,633	45.6	13.9
Zanesville	68	276	.8	3,505	9.6	12.7
Youngstown-						
Buffalo	153	495	1.4	4,759	13.0	9.6
Dayton	209	1,199	3.3	20,791	57.0	17.3
Detroit	153	316	.9	6,541	17.9	20.7
Pittsburgh	59	396	1.1	12,649	34.7	31.9
Zanesville-						
Columbus	52	1,111	3.0	9,486	26.0	8.5
Pittsburgh	95	796	2.2	6,827	18.7	8.6
Other	-	20	-	343	.9	17.2

MARGINAL ROUTE ANALYSIS P-1
ALTOONA, FRANKLIN AND JOHNSTOWN, PENNSYLVANIA, LIMA, TOLEDO, YOUNGSTOWN AND ZANESVILLE, OHIO, AND WHEELING, WEST VIRGINIA

	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$2,424,462	$26.25	--
Aircraft operating expense	2,103,798	22.78	$ .87
Servicing	1,300,859	14.08	.54
Total operating expense	3,404,657	36.86	1.41
Operating loss	980,195	10.61	.40
Return and tax requirement	550,201	5.96	.23
Subsidy need	$1,530,396	$16.57	$ .63

Net effect of suspension/deletion at the eight cities 1/

On-system revenue retained, net of expense	$392,038
Subsidy need decrease	$1,922,434

Statistics (1969 operations)

Aircraft departures	12,616
Revenue miles	1,023,950
O&D passengers	92,356
Revenue passenger miles	20,305,000

Additional Data

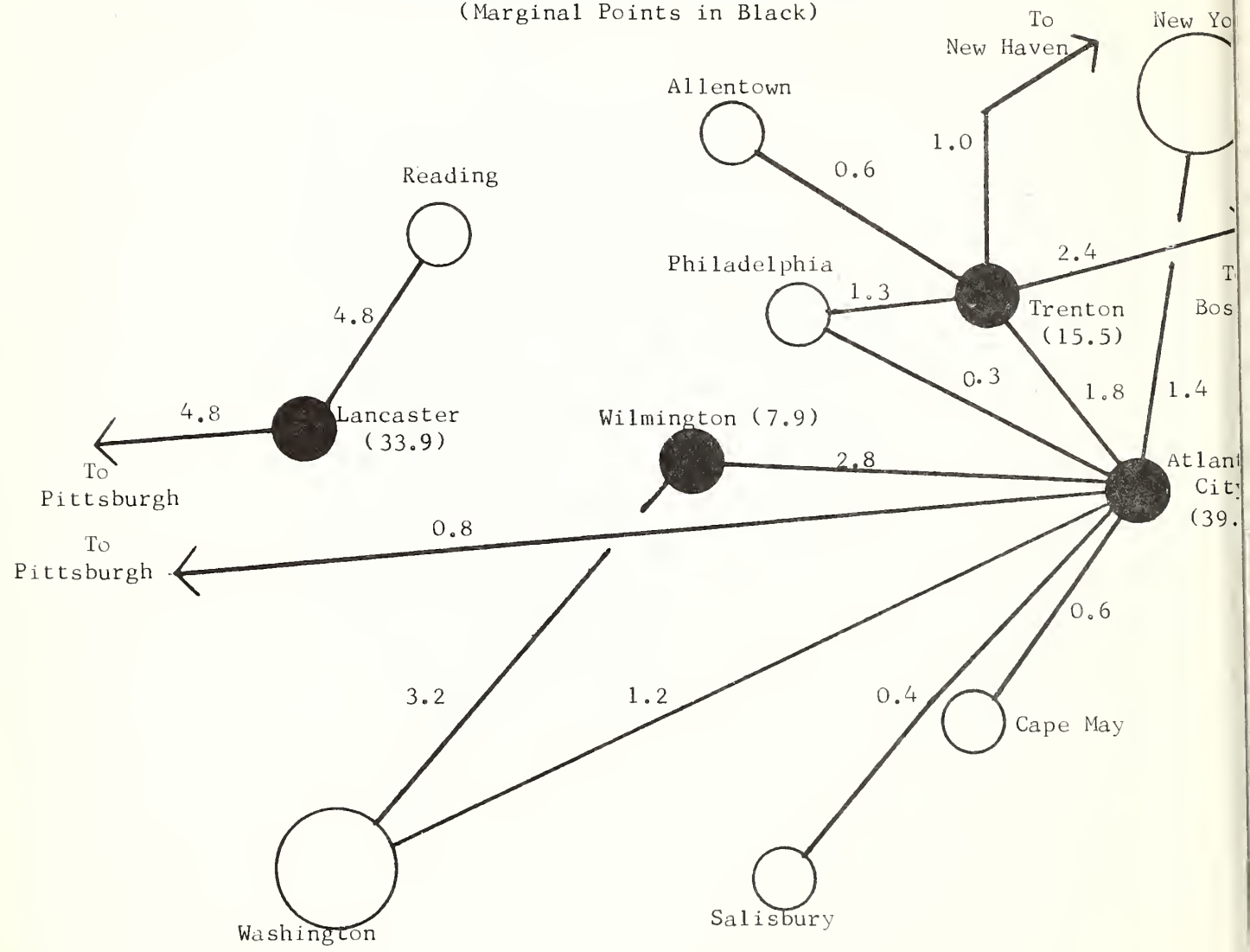
	1969 Station Expense(Form 41)	Population 1970	Certificated Service Since	Closest Remaining Certificated Point
Altoona	$51,000	62,000	1940	State College 46 miles
Franklin	$26,000	24,000	1940	Youngstown 48 "
Johnstown	$47,000	42,000	1940	Pittsburgh 58 "
Lima	$39,000	53,000	1947	Toledo 69 "
Toledo	$56,000	379,000	1938	Toledo, Delta, Eastern, United
Wheeling	$26,000	47,000	1940	Pittsburgh 51 miles
Youngstown	$57,000	140,000	1941	Youngstown United
Zanesville	$19,000	46,000	1947	Columbus 39 miles

1/ Assumes a replacement carrier would operate Altoona-Johnstown-Pittsburgh and Wheeling-Pittsburgh (no provision included for support thereof by Allegheny).

MARGINAL ROUTE ANALYSIS P-2

ATLANTIC CITY AND TRENTON, NEW JERSEY, LANCASTER, PENNSYLVANIA, AND WILMINGTON, DELAWARE

(Marginal Points in Black)



NOTES

(1) 1969 daily passengers originating at each marginal point shown after city name.

(2) 1969 operations: N-262, F-27J and CV-580. Number of average flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS P-2
ATLANTIC CITY AND TRENTON, NEW JERSEY, LANCASTER, PENNSYLVANIA, AND WILMINGTON, DELAWARE

Flight Segment Data	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Atlantic City-						
Cape May	36	202	.6	2,687	7.4	13.3
New York	89	508	1.4	5,496	15.1	10.8
Philadelphia	45	126	.3	1,575	4.3	12.5
Pittsburgh	308	309	.8	9,054	24.8	29.3
Salisbury	92	138	.4	1,627	4.5	11.8
Trenton	66	641	1.8	5,897	16.2	9.2
Washington	139	437	1.2	5,991	16.4	13.7
Wilmington	58	1,004	2.8	13,547	37.1	13.5
Lancaster-						
Pittsburgh	208	1,744	4.8	35,192	96.4	20.2
Reading	25	1,760	4.8	23,718	65.0	13.5
Trenton-						
Allentown	53	217	.6	3,928	10.8	18.1
Boston	245	863	2.4	13,998	38.4	16.2
New Haven	122	369	1.0	6,647	18.2	18.0
Philadelphia	35	459	1.3	8,797	24.1	19.2
Wilmington-						
Washington	96	1,153	3.2	16,268	44.6	14.1

MARGINAL ROUTE ANALYSIS P-2
ATLANTIC CITY AND TRENTON, NEW JERSEY
LANCASTER, PENNSYLVANIA AND WILMINGTON, DELAWARE

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$1,660,646	$22.54	--
Aircraft operating expense	1,639,944	22.26	$ .99
Servicing	904,725	12.28	.54
Total operating expense	2,544,669	34.54	1.53
Operating loss	884,023	12.00	.53
Return and tax requirement	453,454	6.16	.27
Subsidy need	$ 1,337,477	$18.16	$ .80

Net effect of suspension/deletion at the four cities 1/	
On-system revenue retained, net of expense	$ 393,360
Subsidy need decrease	$1,730,837

Statistics (1969 operations)	
Aircraft departures	9,950
Revenue miles	1,132,492
O&D passengers	73,660
Revenue passenger miles	15,402,000

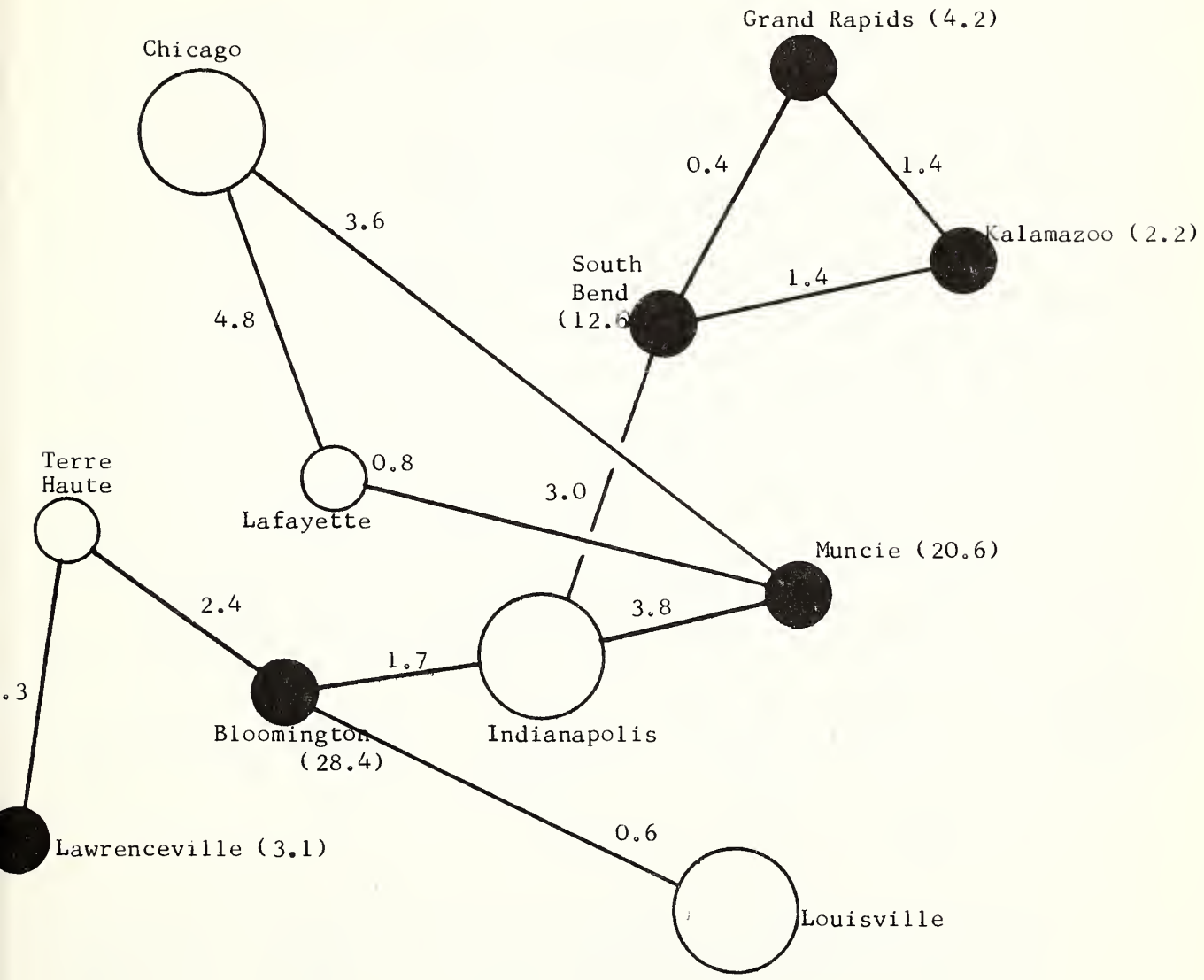
Additional Data

	1969 Station Expense(Form 41)	Population 1970	Certificated Service Since	Closest Remaining Certificated Point	
Atlantic City	$67,000	45,000	1941	Philadelphia	59 mi.
Lancaster	$88,000	58,000	1940	Reading	32 "
Trenton	$50,000	102,000	1948	Philadelphia	17 "
Wilmington	$37,000	80,000	1940	Wilmington	Eastern

1/ Assumes a replacement carrier would operate Cape May-Atlantic City-Philadelphia. Assumes a replacement carrier would operate Philadelphia-Lancaster-Reading-Allentown-New York and Lancaster-Harrisburg-Washington. Assumes a replacement carrier would operate Albany-Philadelphia-Wilmington-Washington (no provision included for support thereof by Allegheny).

MARGINAL ROUTE ANALYSIS P-3

GRAND RAPIDS AND KALAMAZOO, MICHIGAN, BLOOMINGTON, LAWRENCEVILLE, MUNCIE AND SOUTH BEND, INDIANA
(Marginal Points Shown in Black)



NOTES

(1) 1969 daily passengers originating at each marginal point shown after city name.
(2) 1969 operations: N-262 and CV-580 equipment. Number of average daily flights shown on each segment.
(3) Allegheny suspended at Lawrenceville on December 18, 1969. Allegheny also suspended at Muncie on March 5, 1971. The point was transferred to a scheduled air taxi.

MARGINAL ROUTE ANALYSIS P-3
GRAND RAPIDS AND KALAMAZOO, MICHIGAN, BLOOMINGTON,
LAWRENCEVILLE, MUNCIE AND SOUTH BEND, INDIANA

Flight Segment Data	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Bloomington-						
Chicago	208	1,736	4.8	18,776	51.4	10.8
Indianapolis	44	622	1.7	2,244	6.1	3.6
Louisville	81	216	.6	1,145	3.1	5.3
Terre Haute	43	879	2.4	6,547	17.9	7.4
Grand Rapids-						
Kalamazoo	45	527	1.4	2,511	6.9	4.8
South Bend	91	129	.4	747	2.0	5.8
Kalamazoo-						
South Bend	54	526	1.4	3,679	10.1	7.0
Lawrenceville						
Terre Haute	50	832	2.3	1,909	5.2	2.3
Muncie-						
Chicago	178	1,318	3.6	13,994	38.3	10.6
Indianapolis	59	1,378	3.8	8,778	24.0	6.4
Lafayette	82	307	.8	6,048	16.6	19.7
South Bend-						
Indianapolis	137	1,096	3.0	11,771	32.2	10.7

MARGINAL ROUTE ANALYSIS P-3
GRAND RAPIDS AND KALAMAZOO, MICHIGAN, BLOOMINGTON, LAWRENCEVILLE, MUNCIE AND SOUTH BEND, INDIANA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$1,280,238	$25.60	--
Aircraft operating expense	1,213,034	24.25	$ .95
Servicing	662,836	13.25	.52
Total operating expense	1,875,870	37.50	1.47
Operating loss	595,632	11.90	.47
Return and tax requirement	326,534	6.53	.25
Subsidy need	$ 922,166	$18.43	$ .72

Net effect of suspension/deletion at the six cities 1/

On-system revenue retained, net of expense	$ 67,558
Subsidy need decrease	$989,724

Statistics (1969 operations)

Aircraft departures	10,111
Revenue miles	1,062,502
O&D passengers	50,015
Revenue passenger miles	9,665,000

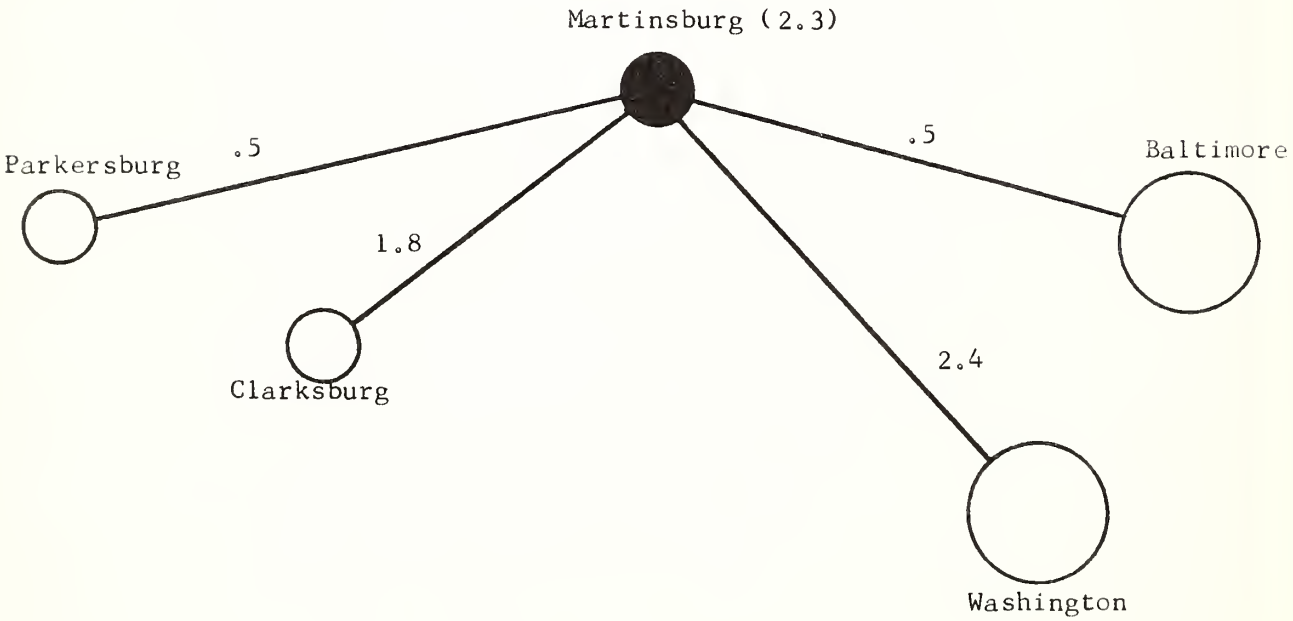
Additional Data

	1969 Station Expense (Form 41)	Population 1970	Certificated Service Since	Closest Remaining Certificated Point
Bloomington	$68,000	43,000	1948	Indianapolis 49 mi.
Grand Rapids	$52,000	196,000	1938	Grand Rapids, United, North Central
Kalamazoo	$27,000	84,000	1938	Kalamazoo, North Central
Lawrenceville	$16,000	24,000	1968	Evansville 47 mi.
Muncie	$47,000	159,000	1953	Indianapolis 52 mi.
South Bend	$46,000	123,000	1938	South Bend United North Central

1/ Assumes a replacement carrier would operate Chicago-Muncie-Indianapolis-Bloomington. Assumes a replacement carrier would operate Kalamazoo-Grand Rapids. Assumes a replacement carrier would operate South Bend-Indianapolis (no provision included for support thereof by Allegheny).

MARGINAL ROUTE ANALYSIS P-4

MARTINSBURG, WEST VIRGINIA
(Marginal Point Shown in Black)



NOTES:

(1) 1969 Daily passengers originating shown after city name.
(2) 1969 Operations: F-27J and CV-580 equipment. Number of average daily flights operated shown on each segment.
(3) Allegheny was suspended at Martinsburg on December 1, 1970. The point was transferred to a scheduled air taxi.

MARGINAL ROUTE ANALYSIS P-4
MARTINSBURG, WEST VIRGINIA

Flight Segment Data	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Martinsburg-						
Baltimore	72	195	.5	2,691	7.4	13.8
Clarksburg	120	671	1.8	11,093	30.4	16.5
Parkersburg	185	188	.5	2,670	7.3	14.2
Washington	64	861	2.4	11,242	30.8	13.1

MARGINAL ROUTE ANALYSIS P-4
MARTINSBURG, WEST VIRGINIA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 69,647	$ 35.68	- -
Aircraft operating expense	297,370	152.34	$4.27
Servicing	105,989	54.30	1.52
Total operating expense	403,359	206.64	5.79
Operating loss	333,712	170.96	4.79
Return and tax requirement	68,660	35.17	.99
Subsidy need	$402,372	$206.13	$5.78

Net effect of suspension/deletion at the city 1/	
On-system revenue retained, net of expense	$ 2,378
Subsidy need decrease	$404,750

Statistics (1969 operations)	
Aircraft departures	1,915
Revenue miles	188,213
O&D passengers	1,952
Revenue passenger miles	340,000

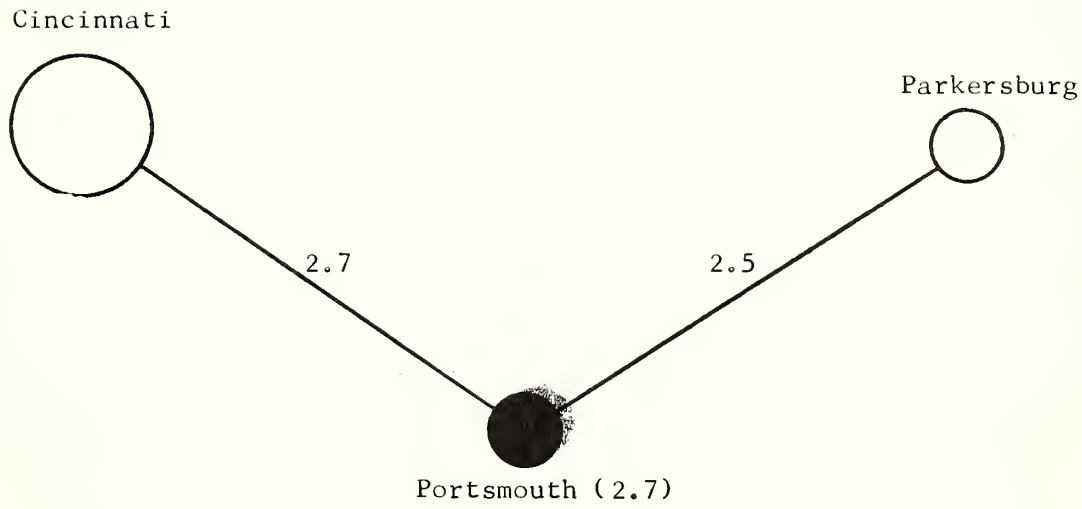
Additional Data

	1969 Station Expense(Form 41)	Population 1970	Certificated Service Since	Closest Remaining Certificated Point	
Martinsburg	$22,000	15,000	1949	Baltimore	67 mi.

1/ Assumes replacement carrier would operate Martinsburg-Hagerstown-Baltimore-Washington (no provision has been made for support thereof by Allegheny).

MARGINAL ROUTE ANALYSIS P-5

PORTSMOUTH, OHIO
(Marginal Point Shown in Black)



NOTES:

(1) 1969 Daily passengers originating shown after city name.
(2) 1969 Operations: N-262 and CV-580 equipment. Number of average daily flights operated shown on each segment.

MARGINAL ROUTE ANALYSIS P-5
PORTSMOUTH, OHIO

Flight Segment Data	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Portsmouth-						
Cincinnati	99	976	2.7	7,035	19.3	7.2
Parkersburg	83	924	2.5	5,426	14.9	5.9

MARGINAL ROUTE ANALYSIS P-5
PORTSMOUTH, OHIO

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$ 56,384	$ 32.33	- -
Aircraft operating expense	229,197	131.42	$4.06
Servicing	46,258	26.52	.82
Total operating expense	275,455	157.94	4.88
Operating loss	219,071	125.61	3.89
Return and tax requirement	61,666	35.35	1.09
Subsidy need	$280,737	$160.96	$4.98

Net effect of suspension/deletion at the city

On-system revenue retained, net of expense	$ 4,782
Subsidy need decrease	$285,519

Statistics (1969 operations)

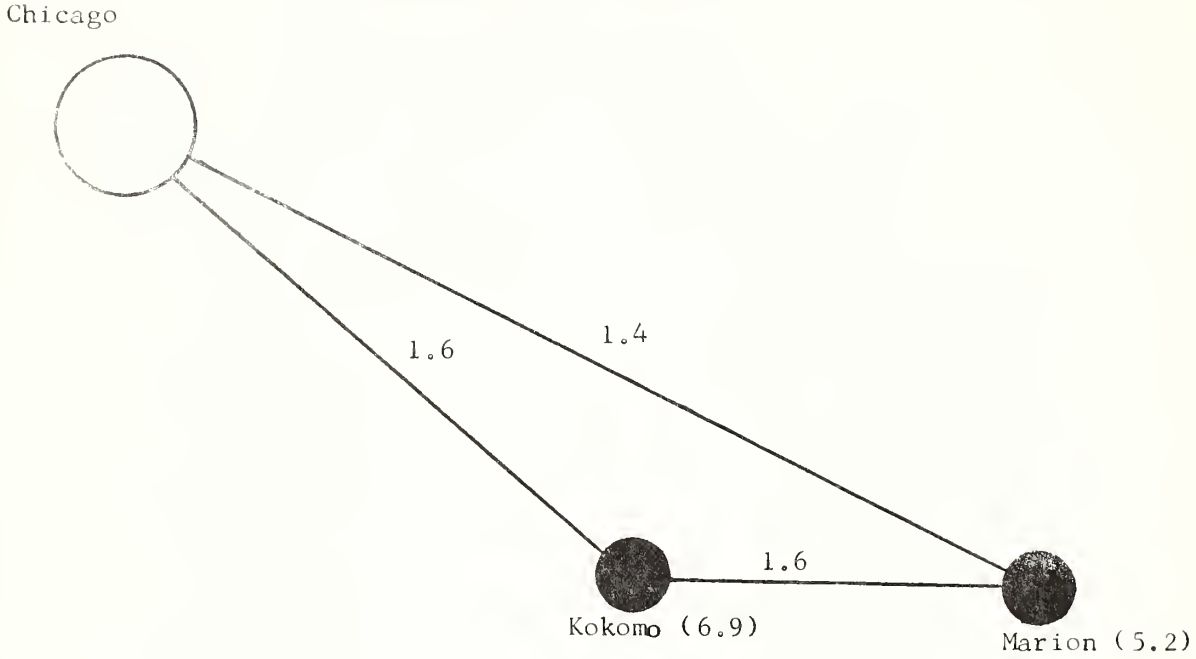
Aircraft departures	1,900
Revenue miles	177,116
O&D passengers	1,744
Revenue passenger miles	250,000

Additional Data

	1969 Station Expense(Form 41)	Population 1970	Certificated Service Since	Closest Remaining Certificated Point
Portsmouth	$15,000	28,000	1940	Huntington, 45 mi.

MARGINAL ROUTE ANALYSIS P-6

KOKOMA AND MARION, INDIANA
(Marginal Points in Black)



NOTES:

(1) 1969 Daily passengers originating at each marginal point shown after city name.
(2) 1969 Operations: N-262 equipment. Number of average daily flights operated shown on each segment.
(3) Allegheny was suspended at both points on November 15, 1969. Both points transferred to a scheduled air taxi.

MARGINAL ROUTE ANALYSIS P-6
KOKOMO AND MARION, INDIANA

Flight Segment Data	Mileage	1969 Trips	Trips Per Day	1969 Psgrs.	Psgrs. Per Day	Psgrs. Per Trip
Kokomo-						
Chicago	140	594	1.6	4,930	13.5	8.3
Marion	21	573	1.6	3,782	10.4	6.6
Marion-						
Chicago	155	509	1.4	3,258	8.9	6.4

MARGINAL ROUTE ANALYSIS P-6
KOKOMO AND MARION, INDIANA

Financial Data	1969 Operations	Per Passenger	Per Dollar of Revenue
Commercial revenue	$160,122	$19.74	- -
Aircraft operating expense	209,875	25.88	$1.31
Servicing	92,308	11.38	.57
Total operating expense	302,183	37.26	1.88
Operating loss	142,061	17.52	.89
Return and tax requirement	60,864	7.50	.38
Subsidy need	$202,925	$25.02	$1.27

Net effect of suspension/deletion at the two cities 1/

On-system revenue retained, net of expense	$ 681
Subsidy need decrease	$203,606

Statistics (1969 operations)

Aircraft departures	1,167
Revenue miles	94,851
O&D passengers	8,110
Revenue passenger miles	1,139,000

Additional Data

	1969 Station Expense(Form 41)	Population 1970	Certificated Service Since	Closest Remaining Certificated Point
Kokomo	$24,000	76,000	1947	Lafayette 46 mi.
Marion	$17,000	40,000	1944	Fort Wayne 52 mi.

1/ Assumes a replacement carrier would operate Chicago-Kokomo-Marion-Indianapolis (no provision included for support thereof by Allegheny).

CITIES INCLUDED IN ALLEGHENY'S 1969 MARGINAL ROUTES

	Average Daily Originating Passengers	Daily Departures
Altoona, Pa.	36.37	3.8
Atlantic City, N. J.	39.85	2.1
Bloomington, Ind.	28.41	4.5
Grand Rapids, Mich.	4.22	0.9
Johnstown, Pa.	24.84	2.8
Kalamazoo, Mich.	2.19	1.4
Kokomo/Logansport/Peru, Ind.	6.87	1.7
Lancaster, Pa.	33.94	4.8
Lawrenceville/Vincennes, Ind.	3.06	1.2
Lima, Ohio	6.26	2.1
Marion, Ind.	5.17	1.5
Martinsburg, W. Va.	2.33	2.6
Muncie/Anderson/New Castle, Ind.	20.61	4.1
Oil City/Franklin, Pa.	10.56	2.2
Portsmouth, Ohio	2.68	2.5
South Bend, Ind.	12.61	2.4
Toledo, Ohio	18.35	2.4
Trenton, N. J.	15.47	3.5
Wheeling, W. Va.	7.01	3.3
Wilmington, Del.	7.87	2.9
Youngstown, Ohio	24.03	3.3
Zanesville/Cambridge, Ohio	3.64	3.0

Note: Service provided with Nord-262, F-27 J and CV-580 equipment.

Source: Appendix P; Form 41's.

CITIES ORIGINATING FEWER THAN 40 DAILY PASSENGERS
BUT NOT INCLUDED IN ALLEGHENY'S MARGINAL ROUTES

Station	Key	Daily Originating Passengers	Daily Departures	Equipment
Cape May, N. J.	1/	17.06	1.3 2/	CV-580
Evansville, Ind.	1/	35.17	2.1	CV-580
Reading, Pa.	1/	32.88	4.1	CV-580

1/ Operating profit.
2/ Seasonal service-6-15-69 through 6-1-69.

NON-HUB CITIES ORIGINATING 40 OR MORE ALLEGHENY PASSENGERS PER DAY

	Daily Originating Passengers	Daily Departures	Equipment
Bradford, Pa.	67.12	8.7	F-27J,CV-580
Bridgeport, Conn.	83.89	7.3	CV-580
Clarksburg/Fairmont, W. Va.	89.49	8.5	N-262,F27J,CV-580
Clearfield/Dubois/Bellefonte/State College, Pa.	55.55	5.1	CV-580
Huntington, W. Va.	68.26	5.1	F-27J,CV-580
Jamestown, N. Y.	42.98	6.0	CV-580
Lafayette, Ind.	58.95	6.0	N-262,CV-580
Morgantown, W. Va.	57.96	8.6	N-262,F-27J, CV-580
New Haven, Conn.	55.96	4.2	F-27J,CV-580
New London, Conn.	85.41	4.6	F-27J,CV-580
Parkersburg, W. Va./Marietta, Ohio	105.05	6.4	N-262,F-27J, CV-580
Terre Haute, Ind.	48.08	7.9	N-262,CV-580
Williamsport, Pa.	113.03	8.9	CV-580

POINTS ON ALLEGHENY'S SYSTEM WHICH HAVE BEEN SUSPENDED OR TRANSFERRED

January 1, 1969-June 30, 1971

	Date Suspended	Estimated Subsidy Need Reduction	Served By Scheduled Air Taxi
Dubois, Pa.	3-10-69	$ 44,000	X
Salisbury, Md.	6-1-69	25,000	X
Mansfield, Ohio	7-1-69	59,000	X
Elkins, W. Va.	9-15-69	35,000	X
Marion, Ohio	11-15-69	230,000	X
Kokomo, Ind.	11-15-69		X
Lawrenceville, Ill.	12-18-69	68,000	
Oil City, Pa.	12-31-69	79,000	X
Zanesville, Ohio	1-15-70	55,000	
Johnstown, Pa.	4-26-70	(107,000)	X
Wheeling, W. Va.	6-1-70	145,000	
Atlantic City, N. J. 1/	7-12-70	96,000	X
Cape May, N. J.	7-12-70	6,000	X
Kalamazoo, Mich.	9-29-70	24,000	
Martinsburg, W. Va.	12-1-70	153,000	X
Muncie, Ind.	3-5-71	105,000	X
Total		$1,017,000	

1/ Partial suspension.

COMPARISON OF CARRIERS ANALYZED IN PART I
ALL DATA - CALENDAR 1969

al System	Air West	Allegheny	Frontier	Texas International
ber of stations	76	73	96	52
al passengers (000)	2,841	4,655 1/	2,348	1,950
sidy need (000,000)	$27.8	$13.3	$13.8	$12.4
sidy received (000,000)	$ 9.4	$ 1.4	$ 9.4	$ 3.3
cent subsidy received of need	34%	10%	61%	27%
ginal Routes				
ber of marginal routes	11	6	14	7
ber of stations	33	22	56	15
cent marginal stations of system	43%		58%	29%
rage station expense (Form 41)	$43,000	$40,800	$32,900	$38,600
bined population-marginal cities (000,000)	1.0	1.9	1.6	.6
sidy need (000,000)	$ 7.3	$ 5.2	$ 11.0	$ 3.9
cent of subsidy received	129%	27%	61%	85%
ber of passengers	304,847	227,467 1/	518,065	171,490
sidy need per passenger	$23.92	$22.67	$21.23	$23.00
sidy need per revenue dollar	$ 1.32	.94	$ .79	$ 1.04
mercial revenue per passenger	$18.00	$24.22	$26.94	$22.15
craft operating expense per pass.	$21.74	$25.60	$25.75	$25.14
vicing expense per passenger	$16.83	$14.58	$15.65	$14.05
io-svcg. exp. to acft. optg. expense	73%	57%	65%	56%
cent of system non-jet departures	36%	23%	57%	33%
cent of originating passengers	5.2%	4.9%	10.7%	8.8%
cent of RPM's in scheduled service	8.1%	3.6%	15.7%	7.4%
cent of passenger revenue	9.2%	4.7%	19.8%	7.9%
cent of total operating expense	12.8%	7.7%	26.8%	12.2%

Allegheny submitted on-flight, rather than on-line, O&D traffic routings for 1969. To eliminate any inconsistency with the treatment of the other carriers, the on-flight total traffic reported for each Allegheny marginal point was distributed to the appropriate on-line markets on the basis of data for 1969 in Table 10 of the Board's Surveys.

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